

INTRODUCTION

The December 1990 issue of the Architectural-Engineer's Guide for Specifications marks the beginning of a new era for the Sacramento District Corps of Engineers. Due to more efficient automation, many new procedures have been adopted. The Sacramento District Corps of Engineers is constantly striving for newer and better ways to serve our customers and your suggestions and comments are welcomed.

Highlights of changes:

- o New Abridged Guide Specifications (CEAGS).
- o Technical References & Standards are now accessible via the electronic bulletin board.
- o A new requirement to submit project specifications (including "marked up specs") on 5-1/4" floppy disks.
- o New requirements for the use of proprietary items.
- o Suggestion form for our customers to send us their suggestions and/or comments.
- o More current guide specifications available.
- o New index showing quarterly changes, deletions and new available guide specifications. This index includes information on superseded guides.

ARCHITECTURAL-ENGINEER'S GUIDE
SPECIFICATIONS-VOLUME III
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PART 1 GENERAL INSTRUCTIONS

1.1 GENERAL

Outline specifications shall accompany concept preliminary drawings, estimates, and the Basis for Design. They shall show items to be covered in the Project Specifications that will subsequently be prepared for bidding purposes. Outline Specifications shall list or describe the material to be included in the Contract Specifications. To determine if the final design will provide an operable and usable facility within the budgeted funds, all Outline Specifications and other preliminary data shall be reviewed by the Corps of Engineers and the using agency. Information not included in the Basis for Design or shown on the drawings must be provided in the Outline Specifications so that the reviewer can determine the quality and cost of the structure and equipment. However, the sequence of the information presented is flexible.

1.1.1 HQUSACE/OCE (Headquarters U. S. Army Corps of Engineers/Office of the Chief Engineer) Guide Specifications

Guide specifications issued HQUSACE/OCE are prefixed with CEGS- and/or CEAGS-. They establish the format to be used for project specifications in order to maintain uniformity of construction throughout the Corps. The basic guides contain requirements that have been coordinated with industry. They may be used as worksheets for editing by the preparer of project specifications. Certain requirements in the guide specifications have general applicability to all projects, while others vary from project to project and must be modified.

1.1.2 Sacramento District Prepared Guide Specifications

Guide specifications written exclusively for use within the Sacramento District are designated by the prefix SPK-. The SPK Guide Specifications are prepared by the Sacramento District when no other guide specification is available concerning a particular topic.

1.1.3 Project Specifications Prepared by Other Districts

Occasionally, the Sacramento District is directed to site adapt and construct a design created in another Corps of Engineers District. The project specifications prepared by another district may then be authorized for use to perform similar work in the Sacramento District. Project Specifications prepared by other districts shall be carefully reviewed to determine necessary modifications for site adaptation. Revisions will be made ONLY when necessary in order to conform to the latest applicable HQUSACE/OCE guide specification and any policy regarding its use.

1.1.4 Statement of Method of Materials

When CEGS, CEAGS, or SPK Guide Specifications are unavailable, a statement of the method of construction and materials to be used is required in the outline specification.

1.1.5 Specification Format

The organization and numbering of specification divisions shall conform to the Construction Specification Institute (CSI) format. See paragraph "Instructions for Preparation of Final Project Specifications" in this guide.

The CSI format used for the numbering of guide specifications standardizes the organization for sections of the Technical Specifications. They are separated into sixteen (16) categories, each division having a standard subject heading.

1.2 AVAILABILITY OF GUIDE SPECIFICATIONS, REFERENCED SPECIFICATIONS, AND STANDARDS

Most of the specifications and standards referenced in the guide specifications are available for viewing at the U.S Army Corps of Engineers, Sacramento District, Specifications Section, 650 Capitol Mall, Room 7045, Sacramento, California 95814.

1.2.1 Obtaining Copies of Federal and Military Specifications and Standards and Other Referenced Publications

Federal and Military Specifications and Standards may be requested by letter, by DD Form 1425 (available from the Project Manager), or by telephone, from the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120, (215) 697-3321.

Other referenced publications are available from the organizations listed in Appendix M.

When requesting publications by letter, clearly indicate the Title, number, date, latest amendment number and date (if any), and the Solicitation or Contract Number for which the publication is to be used.

1.2.2 Obtaining Guide Specifications Via Electronic Bulletin Board

The Sacramento District operates a 24 hour, 7 day a week electronic bulletin board for guide specifications called SPKSPECS. To request access to the bulletin board and/or for information concerning the electronic bulletin board, call (916) 551-2333 between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding holidays. Once a user log-in is assigned, HQUSACE/OCE and Sacramento District prepared guide specifications can be obtained electronically by calling (800) 445-8643 or (916) 551-4986. The bulletin board is in ASCII format and supports 1200, 2400, 4500 or 9600 baud rates.

The SPKSPECS modems are manufactured by Microcom. The protocol for all communications is 8 bit, 1 stop bit, and NO parity. The system is operated on a Sperry mini computer, with a 515 Megabyte hard disk. The bulletin board is a UNIX System V, multi-user, remote, bulletin board that has been modified by the Sacramento District. It was originally written by Brandon S. Allbery and is named the UNaxcess System. Please see the SPKSPECS USER MANUAL (Appendix N) in this guide for further information on accessing the Sacramento District Electronic Bulletin Board.

Applicable specification sections should be obtained prior to the preparation of outline specifications, but after the materials of construction have been determined. Please note the date of each guide specification each time you enter the bulletin board to assure obtaining the most current guide available.

1.2.3 Obtaining Printed Copies of Guide Specifications

Copies of guide specifications can be obtained through the Project Manager by special request only. You may order them by using the request forms provided in the Appedices or by contacting your Corps Project Manager. Otherwise, all specifications shall be obtained via the electronic bulletin board. Questions

regarding any guide specifications may be directed to the staff in the Criteria Management Unit at (916) 551-2333 between the hours of 7:00 A.M. and 4:00 P.M. Monday through Friday, excluding holidays.

* * * * *

PART 2 INSTRUCTIONS FOR PREPARATION OF OUTLINE SPECIFICATIONS

NOTE: Specifications used as the basis for the preparation of Outline Specifications are described in PART 1 and are listed below in the order of priority.

2.1 SOURCE OF MATERIALS FOR USE IN THE PREPARATION OF OUTLINE SPECIFICATIONS

2.1.1 Specifications List In Order Of Priority

- A. HQUSACE/OCE Guide Specifications
- B. Sacramento District Instructions to each Guide Specification
- C. District Prepared Specifications
- D. Project Specifications prepared by other Districts

2.2 PREPARATION OF OUTLINE SPECIFICATIONS

2.2.1 General

Outline Specifications are based on the basic OCE Guide Specifications and District-Prepared Specifications (as previously indicated).

An example of a (partially) prepared Outline Specification is shown in Appendix Q.

* * * * *

PART 3 INSTRUCTIONS FOR PREPARATION OF FINAL PROJECT SPECIFICATIONS

3.1 GENERAL

The following material shall be prepared and submitted in accordance with the instructions contained in this chapter:

- a. Cover Sheet (Appendix A)
- b. Bidding Schedule (Appendix B Items 1,2,3, & 4)
- c. List of Drawings (Appendix C)
- d. List of Government Furnished Property (Appendix D)
- e. Eng Form 4288 (Appendix E)
- f. Submittal Master List (Appendix F)
- g. Table of Contents of Technical Specifications Division (Appendix G)
- h. Description of Additive Bid Items (Appendix I)
- i. Final Project Specification (Printed Copy) (Appendix J)
- j. Construction Quality Control Paragraph (Appendix K)
- k. Final Job Specification on a 5 1/4" Floppy Diskette
- l. Amendment (Appendix L Items 1,2,3,4,5,6,7, & 8)

(NOTE: All marked-up guides shall accompany the corresponding typed masters in all transmittals.)

3.2 BIDDING SCHEDULES

Appendix B Items 1 through 4 show examples of Bidding Schedules. Contracts can be prepared on a lump sum or unit price basis and can have additional work established as additive items or base bid work deleted by the use of deductive items. All project specifications must contain a bidding schedule.

3.2.1 Lump Sum Contracts

Bidding will be on a lump sum basis for most projects (Appendix B Item 1). Some lump sum projects requiring two or more items shall show the "Total Bid" amount on the Bidding Schedule. All Air Force projects of new vertical construction (buildings) require a five-foot line break-out of this type. Projects where grading, paving, and utility items are incidental to structures and the monetary value is small by comparison, will be bid on a lump sum basis. Where bidding is on a lump sum basis, all measurement and payment provisions in each guide specification shall be deleted.

3.2.2 Unit Price Contracts

Bidding will be on a unit price basis where 1) large quantities of work such as grading, paving, outside utilities, or site preparation are involved, 2) quantities cannot be determined in advance of advertising within limits that would permit a lump sum bid without a substantial contingency, 3) quantities may change significantly during construction, or 4) bidders would have to expend unusual effort in making take-off's of quantities. The selection of unit price bid items will be made in accordance with and under the circumstances given above. An example of a unit price bidding schedule is shown in Appendix B Item 2).

Measurement and payment for each item must be precise, clearly written, and without contradictions. The provisions for such measurement and payment shall be included in the technical section pertinent to the particular item of work unless otherwise indicated. In most cases, the provisions are already provided for in the basic Guide Specification where they must be specially written and included.

3.2.3 Additive Items

When funds for a project are not available to cover all the desired features of the work, a base bid item is established for the most desirable features of the work. The other features are then listed as Additive Items in order of priority. Additive Items must be clearly presented and identified in the drawings, or precisely defined in the specifications. Estimated costs for each item must be given close consideration for projects with multiple Additive Items that are awarded in accordance with the following paragraph:

(APR 1968) For purposes of award, the low bidder shall be the conforming responsible bidder offering the low aggregate amount for the first or base bid item, plus (in the order of priority listed in the schedule) those additive bid items providing the most features of the work within the funds determined by the Government to be available before bids are opened. If addition of another bid item in the listed order of priority would make the award exceed such funds transmittals for all bidders, it shall be skipped and the next subsequent additive bid item in a lower amount shall be added if award thereon can be made within such funds. For example, when the amount available is \$100,000 and a bidder's base bid is \$85,000 with four successive additives of \$10,000, \$8,000, \$6,000 and \$4,000, the aggregate amount of the bid, for purposes of award, would be \$99,000 for the base bid plus the first and fourth additives, the second and third additives skipped because each of them would cause the aggregate bid to exceed \$100,000. In any case, all bids shall be evaluated on the basis of the same additive bid items. The listed order of priority need be followed only for determining the low bidder.

After determination of the low bidder, award in the best interest of the Government may be made on the base bid and any combination of additive bid items for which funds are determined to be available at the time of the award, and on such combination of additive bid items not exceeding the amount offered by any other conforming responsible bidder for the same combination of bid items.

Unless unusual circumstances exist, an additive should never have an estimated cost of less than \$1,000. See Appendix B Item 3 for an example of a bidding schedule with additive items.

3.2.4 Deductive Items

When funds for a family housing project are not available to cover all the desired features of the work, a base bid item is established containing all possible features of the work. Features that can be deleted are listed as deductive items in reverse order of priority (the least needed item to be deducted first, the most needed item to be deducted last). DEDUCTIVE ITEMS ARE TO BE USED FOR FAMILY HOUSING PROJECTS ONLY. Deductive features must be clearly presented and identified in the drawings, or precisely defined in the specifications (See Appendix B Item 4). Estimated costs for each item should be given close consideration for projects with multiple Deductive Items that are awarded in accordance with the following paragraph:

(APR. 1968) For purposes of award, the low bidder shall be the conforming responsible bidder offering the aggregate amount for the first or base bid item, plus (in the order of priority listed in the schedule) those deductive bid items providing the most features of the work within the funds determined by the Government to be available before bids are opened. If subtraction of a deductive bid item in the listed order of priority would make the award exceed such funds for all bidders, the next subsequent deductive bid item shall also be deducted. For example, when the amount available is \$100,000 and a bidder's base bid and four successive deductives are \$113,000, \$4,000, \$6,000, \$8,000 and \$10,000, the aggregate amount of the bid for purposes of award would be \$95,000 for the base bid minus the first, second, and third deductive items. In any case all bids shall be evaluated on the basis of the same deductive bid items. The listed order of priority need be followed only for determining the low bidder. After determination of the low bidder, award in the best interest of the Government may be made according to the base bid and any combination of deductive bids for which funds are determined to be available at the time of the award, provided that award on such combination of bid items does not exceed the amount offered by any other conforming responsible bidder for the same combination of bid items.

Unless unusual circumstances exist, a deductive item should never have an estimated value of less than \$1,000. See Appendix B Item 4 for an example of a bidding schedule including deductive items.

3.3 LIST OF DRAWINGS

The list of drawings shall include all project drawings and standard drawings in the format shown in Appendix C. All drawings shall be listed by exact title together with the district file number and the sequential sheet number.

3.4 LIST OF GOVERNMENT FURNISHED PROPERTY

Government furnished, Contractor installed property together with the approximate cost and the availability of the property to the Contractor, shall be listed on a sheet as shown in Appendix D and shall be included in the Special Clauses as appropriate.

3.5 SUBMITTAL REGISTER

The Submittal Register, ENG Form 4288 (Appendix E) shall be prepared from the Master Listing Of Submittals (See Appendix F) and submitted with the field constructability package (90% design review). In the event that a new guide specification does not appear on the Master Listing of Submittals contact your Corps Project Manager for instructions.

3.5.1 Preparation

The partially completed register (Appendix E) illustrates how submittal items that have been identified during design would appear at the end of the Special Clauses. Columns entitled NAS Activity Code, Item Number, Contractor Schedule Dates and Contractor Action are completed by the Contractor after a Contractor is developed. Columns entitled Classification, Government Action, and Remarks are completed by the Corps of Engineers.

3.6 TABLE OF CONTENTS AND INDICES

The Table of Contents of the Technical Specifications shall begin at the top of the page and shall show the division and section titles and numbers (Appendix G). Divisions not used shall be marked "Not Applicable". The end of the Table of Contents shall be marked by five asterisks (* * * * *) located two spaces below the last line and centered on the page. All pages shall be numbered.

3.7 ASSEMBLY AND HANDLING OF GUIDE SPECIFICATIONS

3.7.1 Assembly

Verify that you have the latest version available of the guide specifications. The project specification number must appear in the upper right corner of each page. The project number is available from your Corps Project Manager.

3.7.2 Handling

Upon assembly of all guide specifications, review the data in each one with particular emphasis on SACRAMENTO DISTRICT NOTES located at the end of the guide. (Some guides may not contain Sacramento District Notes). Check Technical Manuals (TM's) and other materials referenced and distribute pertinent guide specifications to applicable consultants.

3.8 PREPARATION OF TECHNICAL SPECIFICATION SECTIONS

The District will make guide specifications available for each project on the electronic bulletin board, SPKSPECS, for the designer to use in the preparation of each technical specification section. The Technical Specification Sections will be prepared from, and shall be consistent with, the approved Outline Specifications. Reference ER 1110-345-720 (Appendix H) for further information on policies and procedures for the preparation of the technical provisions of specifications for military construction.

3.8.1 Titles and Section Numbers

Titles and Section Numbers included in the Outline Specifications shall be submitted to the Corps Project Manager for approval. If no outline specifications are required, the guide specification titles and section numbers of the edited guides shall be used.

3.8.2 Editing of Guide Specifications

All material not part of the final specification shall be marked out. Paragraphs shall be renumbered when necessary but shall always be renumbered in the format (i.e. 1, 1.1, 1.1.1, 2, 2.1, 2.1.1, etc.) consistent with the latest guide specifications.

3.8.3 Applicable Publications

The applicable publications paragraph at the beginning of each guide specification shall be edited with the text. Only those publications referenced in the proceeding text should remain.

3.8.4 Trade Names and Proprietary Items

As a general policy, the use of trade names, proprietary items, and the drafting of a specification by adopting a manufacturer's description of a particular commercial article shall be avoided. When it is necessary to specify materials or equipment not in the guide specification, minimum requirements will be stated in terms of physical characteristics, chemical composition, laboratory test results, performance in actual use, etc., in such a manner as to ensure full and free competition. For clarification use trade name(s) qualified by specific identification such as manufacturer's model number(s) or catalog number(s) and further qualified with the words "or approved equal" only when absolutely necessary. Where practicable, it is best to state criteria to be used for determining whether an "equal" proposed by a Contractor will be approved, such as strength, capacity, size, etc. Proprietary materials, systems, and processes will not be employed to the exclusion of other materials, systems, and processes, or in ways that might be restrictive.

When an article is specified by general characteristics or performance, at least two and preferably three or more brand name descriptions shall be furnished.

When it is necessary to exclusively specify or employ a proprietary material, system, or process, a report of each instance will be submitted promptly by the Architectural-Engineer. The report shall state all the facts pertaining to the matter and the justification for the need to use a particular system or process. In addition, the specifications shall contain a statement similar to the following: "The allowance for substitution of an approved equal, as stated in CONTRACT CLAUSES paragraph MATERIAL AND WORKMANSHIP, is not applicable to this item; only the stated manufacturer and model number is acceptable."

3.8.5 Construction Contract

The Construction Contract used by the Corps of Engineers is a two party contract. The only parties involved are the Contractor and Contracting Officer. Whenever the terms "Contractor" or "Contracting Officer" are used in the specifications they must be capitalized. Do not refer to any third party (i.e. "others", "Owner", "Engineer", "Electrical Subcontractor" or other subcontractors).

3.8.6 Warranty Clause

A one year warranty clause will be included by the Sacramento District in Division 1 of the Technical Specifications. Several guides contain guarantee clauses which require extended warranties. The clauses will be retained but none shall be added to guides that do not now contain them now. When a section is to be Architect-Engineer prepared, a special guarantee or warranty clause shall not be used unless the material or equipment is of a special design where the interest of the Government clearly requires such a clause.

3.8.7 Architectural-Engineer Prepared Sections

When special subject matter cannot be found in the existing guide specifications, it must be included with an existing guide or be written up as a new section. An Architect-Engineer prepared section shall follow the format of the most recent guide and state precisely what is expected from the Contractor in clearly worded statements. Vague statements are to be avoided (i.e. "to the satisfaction of the Contracting Officer", "in a neat and workmanlike manner",

"good working order", or "tests will be made unless waived"). Carefully coordinate the text with the drawings to prevent conflicts.

General correlation between drawings and specifications is a significant part of the coordination job. The scheduling of the work must allow time and personnel to:

- o Check the specifications to assure that statements such as "indicated" or "unless otherwise indicated" are followed up in the specifications or the drawings. Delete unnecessary statements.
- o Verify that the terminology used on the drawings is the same as that used in the specifications. In the case of a conflict, change the drawings to match the specifications.
- o Coordinate and cross-check the drawings and specifications prepared by subcontractors into the balance of the work.
- o Physically assemble for proofreading of specifications and cross-checking of all drawings and specifications prior to reproduction and submittal to the District Office.

3.8.8 Government Property

Government property as referred to in military construction contracts will be classified in the categories specified below and the specifications will be prepared as follows:

3.8.9 Specification Number

The specification number, unique to the project, should be obtained from the Project Manager and placed in the upper right corner of each page. Do not enclose the specification number in parenthesis.

3.8.10 Paper and Font

Project specification documents shall be prepared on 8-1/2" x 11" (20-lb.) bond paper. Font shall be elite (12 pitch).

3.8.11 Floppy Disks

Floppy diskette(s) (5 1/4", double sided, double density) shall accompany electronically prepared Final Job Specifications along with the marked-up printed copies. Modifications to the guide specifications shall be clearly shown on the diskette(s). A word processing program that provides attributes such as "redline" and/or "strike-over" is preferred, however, any method that will show modifications clearly and concisely shall be acceptable.

* * * * *

PART 4 INSTRUCTIONS FOR PREPARATION OF AMENDMENTS

4.1 GENERAL

The following material shall be prepared and submitted in accordance with the instructions contained in this chapter and Appendices A through O.

Specification modifications shall be marked or noted so that changes will be easily recognized. It is important to include only the pages that are changed. Architectural-Engineer will only prepare changes to the Technical Specifications. Cover Sheet and other revisions will be handled by the Sacramento District. Note indicating Enclosure Number and Amendment shall be placed in the lower right corner of each page. (Appendix L Items 1-8.) Specification changes are generally Enclosure 1. New and Revised Sections are not. If unsure of enclosure number leave blank space or check with Project Manager. (See Appendix L). Modifications shall be returned to project Manager at least 15 days before Bid Opening Date.

4.1.1 Sequence of Pages

Inserts (added text) that runs over the page or require a new page that is not the end of a section shall be prepared as follows:

Page number will remain the same and a hyphen followed by a lower case letter shall be added to each additional page in alphabetical order. Following pages that have not been changed shall not be included in Amendment. (See Appendix L Item 4).

A note will be added below the page number of the page that precedes pages that are added. (See Appendix Item 6).

Deletions (removed text) that will eliminate one or more pages shall be prepared as follows:

Page numbers following deleted page or pages shall remain the same and not be included in Amendment if they have not been changed. (See Appendix L).

A note will be added below the last page number before deleted pages occur. (See Appendix L).

4.1.2 Paragraph Sequence

Paragraph numbering will be handled in the same manner as page numbering. (See Appendix L).

4.1.3 Multiple Amendments to Project

Projects having two or more modifications should only have the latest modifications noted or marked. Text from previous Amendments will remain the same and asterisks or other methods of notation will be removed.

4.2 PREPARATION OF ELECTRONICALLY PREPARED AMENDMENTS

4.2.1 Modifications

Modifications shall be made in a manner that will exhibit all changes. It is not necessary to use asterisks. Use of a word processing system with "Redline" and "Strike-Out" capabilities is preferable. New or revised sections shall be prepared in the same manner. (See Appendix L).

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Appendix A

U.S. ARMY ENGINEER DISTRICT

CORPS OF ENGINEERS

SACRAMENTO, CALIFORNIA

SPECIFICATION NO. ----

PROJECT TITLE

LOCATION OF PROJECT
(Base or County and State)

Appendix B - Item 1

Spec. No.

BIDDING SCHEDULE

Item No.	Description	Amount
1.	Barracks Modernization, Complete	\$

NOTE: Bidders shall insert either figures or words, but not both.

Appendix B - Item 2

Spec. No.

BIDDING SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
1.	Demolition	1	Job	LS	\$
2.	Excavation	50,280	CY	\$	\$
3.	Compact Subgrade	167,517	SY	\$	\$
4.	P.C. Concrete	88,447	CY	\$	\$
5.	Portland Cement	24,096	Ton	\$	\$
6.	Tie Down Anchors	14	Ea	\$	\$
7.	Electrical Work	1	Job	Lump Sum	\$

TOTAL ESTIMATED AMOUNT \$

Bids must be submitted on all individual items of this bidding schedule; otherwise, the bids for this bidding schedule will be considered nonresponsive and will be rejected.

If a modification to a bid based on unit price is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on apro rata basis to every unit price in the bid schedule.

All extensions of the unit prices shown will be subject to verification by the Government. In case of variation between the unit price and extension, the unitprice will be considered to be the bid.

Appendix B - Item 3

Spec. No.

BIDDING SCHEDULE

BASE BID ITEMS

Item No.	Description	Amount
1.	Landing Gear Overhaul Facility, Complete to the 5 foot Building Line, except for Additive Items below.	\$
2.	Site Work and Utilities outside the 5 foot Building Line, except for Additive Items below.	\$
TOTAL BASE BID		\$

ADDITIVE ITEMS

The bidder shall state in the places provided below the amounts that will be added to the Total Base Bid for the Additive Items listed, if it is decided to add any one, all of them or a combination of them to the Total Base Bid in the award of the contract. For determination of low bidder see paragraph titled ADDITIVE ITEMS in the Instructions to Bidders. (See Section 01010 for description of Additive Items.)

Additive Item No.	Description	Amount
A1.	Parking Area and Driveway	\$
A2.	Pedestrian Underpass	\$
A3.	Insulation of Precast Concrete	\$
A4.	LP Gas Standby System	\$

A5. Sprinkling and Landscaping \$

A bid on the above schedule must include a total price for the basic schedule together with a price for each item listed therein and a price for each of the additives listed under the additive schedule. Failure to do so will cause the bid to be considered nonresponsive.

If a bid or modification to a bid is submitted and provides for a lump sum adjustment to the total bid, the application of the lump sum adjustment to each item in the bidding schedule must be stated, or if it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every item in the bidding schedule.

Appendix B - Item 4

(Spec. No.)

BIDDING SCHEDULE

BASE BID ITEM

Item No.	Description	Amount
-------------	-------------	--------

1.	Improvements to Family Housing, Complete	
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BASE BID \$

DEDUCTIVE ITEMS

The bidder shall state in the places provided below the amounts that will be deducted from the Base Bid for the Deductive Items listed, if it is decided to deduct any one, all of them or a combination of them of them from the Base Bid in the award of the contract. For determination of low bidder see paragraph titled ADDITIVE ITEMS in the Instructions to Bidders. (See Section 01010 for description of Deductive Items.)

Deductive Item No.	Description	Amount
D1.	Reroofing of Existing Roofs	\$
D2.	Landscaping	\$
D3.	Furnishing and Installing New Vanity in Bath 2	\$

D4.	Furnishing and Installing New Vanity	\$
	Bath 1	

A bid on the above schedule must include a price for the basic schedule and a price for each of the deductives listed under the deductive schedule. Failure to do so will cause the bid to be considered nonresponsive.

If a bid or modification to a bid is submitted and provides for a lump sum adjustment to the total bid, the application of the lump sum adjustment to each item in the bidding schedule must be stated, or if it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every item in the bidding schedule.

Appendix C

Spec. No.

LIST OF DRAWINGS

Description	Sheet No.	Rev. No.
Spec. No.	, File No.	118-25-1040
Plot Plan and Grade Sections	1	
Floor Plans	2	
Elevations	3	
Sections	4	
Schedules and Details	5	
Window, Door, and Louver Details	6	
Foundation Plan	7	
Roof Framing Plan	8	
Wall and Framing Section	9	
Trusses and Details	10	
Sections and Reinforcing Details	11	

STANDARD DRAWINGS

**To Be Inserted by Sacramento District)
(Attached to SECTION: FENCE, CHAIN LINK)

**Dwg. No. 40-16-08 Fence and Details

(Attached to SECTION: ELECTRICAL WORK, INTERIOR)

Dwg. No. 40-06-04 Sheets 1, 2, 10, 30, and 31

NOTE: For Standard Drawing list, use sheets that are listed in SECTION:
ELECTRICAL WORK, INTERIOR, paragraph LAMPS AND LIGHTING FIXTURES.

Appendix D

Spec. No.

List of Property to be furnished by the Government
and Installed by the Contractor

Quantity	Description
3	Roof vent fans, Model BE3-18c, 2250 CFM @ 1/2" SP HP, 440/3/60 with automatic damper, bird screen, fire safety switch and thermal overload protection in motor windings.
3	Thermostats to control above fans.
3	Motor starters for above fans.
2	Circulating Pumps Cat. No. BC-7-2, 2-1/2" Flanged 440/3/60.
8	Single seated valve V 5011 A 12451 (D.A.) 1-1/4 pipe size.
4	Pneumatic valve actuator, (D.A.) MP953C 1026-2 without positioning relay spring range 4 to 11 psi.

The cost of the Government-Furnished Property is
estimated to be approximately \$

NOTE: The property is available at

NOTE TO SPEC WRITER: Government-Furnished/Contractor-Installed property is material or equipment furnished to the Contractor without cost and will be made available at a specified location.

Appendix E

FAX files for ENG FORM 4288 are attached to this file. You will be given the opportunity to send a selected form to your FAX machine after viewing this file.

Contact your project manager to obtain ENG FORM 4288 if you do not have a FAX machine available.

Appendix F

ARCHITECTURAL-ENGINEERING GUIDE VOLUME III- SPECIFICATIONS DECEMBER 1990

***** MASTER LISTING OF SUBMITTALS *****

C = Certificate	S = Sample
G = Guarantee	SD = Shop Drawings
M = Manufacturer's Data	T = Test Report
O = Other as Noted	* = If Applicable

THE MOST CURRENT GUIDE SPECIFICATIONS ARE AVAILABLE ON THE ELECTRONIC BULLETIN BOARD. THE INDEX IS UPDATED WEEKLY; CHECK THE BOARD FOR THE MOST UP-TO-DATE GUIDE SPECIFICATIONS. THE FOLLOWING LISTING IS PROVIDED AS GUIDANCE ONLY WHEN REQUESTING HARD COPIES. CONTACT YOUR PROJECT MANAGER FOR INSTRUCTIONS IF A NEW GUIDE SPECIFICATION DOES NOT APPEAR ON THE MASTER LISTING.

[* NOTE: Specification paragraph number will be inserted by A-E]

* SPECIFICATION

GUIDE SPEC NUMBER	PARAGRAPH NUMBER	DESCRIPTION OF MATERIAL	TYPE OF SUBMITTAL
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DIVISION 1 - GENERAL REQUIREMENTS

SC's		Mechanical Room Layout Drawings	O
CW-01430		Environmental Protection Plan	O
CW-01430		Identification of Land Resources to be Preserved	

DIVISION 2 - SITE WORK

CE-1305.01		Drillers Log and Core Samples	S, O
CE-1305.02		Drillers Log and Core Samples	S, O
CE-1307		Relief Well and Pump Test Logs	O
CE-1307		Shop Drawings	SD
CE-1307		Well Screen	S
CE-1308		Stone Protection Materials	S
CE-1308		Service Record for Stone	O
CE-1308		Weight Certificates for Stone	C
CE-1309		Borrow Area Source	S, O
CE-1309		Settlement Measurements	O
CE-1309		Plans for Use of Existing Levee or Embankment Materials	O
CE-2205.01a		Turbine Water Flow Measuring Equipment	M
CE-2205.01a		Factory Tests	T
CEGS-02081		Regulations	C

CEGS-02081	State and Local Licenses	O
CEGS-02081	Permits	O
CEGS-02081	Notification	O
CEGS-02081	Preconstruction Meeting	O
CEGS-02081	Material Inventory	O
CEGS-02081	Abatement Plan	O
CEGS-02081	Fiber Results	O
CEGS-02081	Training	C
CEGS-02081	Waste Plan	O
CEGS-02082	Regulations	C
CEGS-02082	State and Local Licenses	O
CEGS-02082	Permits	O
CEGS-02082	Notification	O
CEGS-02082	Preconstruction Meeting	O
CEGS-02082	Material Inventory	O
CEGS-02082	Abatement Plan	O
CEGS-02082	Fiber Results	O
CEGS-02082	Training	C
CEGS-02082	Waste Plan	O
CEGS-02083	Regulations	O
CEGS-02083	State and Local Licenses	O
CEGS-02083	Permits	O
CEGS-02083	Notification	O
CEGS-02083	Asbestos Material	O
CEGS-02083	Fiber Results	O
CEGS-02083	Training	C
CEGS-02201	Capillary Water Barrier	T
CEGS-02222	Density Tests	T
CEGS-02225	Blasting Plan	O
CEGS-02225	Physical Test	C, T
CEGS-02232	Test Results	T
CEGS-02232	Material Source	O
CEGS-02233	Test Results	T
CEGS-02233	Waybills and Delivery Tickets	O
CEGS-02234	Tests Results	T
CEGS-02234	Waybills and Delivery Tickets	O
CEGS-02235	Material Test	T
CEGS-02335	Density Tests	T
CEGS-02235	Test Results	T
CEGS-02235	Waybills and Delivery Tickets	O
CEGS-02236	Test Results	T
CEGS-02236	Test Results from Samples	T
CEGS-02238	Test Results	T
CEGS-02238	Density Test/Calibration Data	T
CEGS-02238	Sample Test Results	T
CEGS-02238	Sample Test Results	T

CEGS-02238	Mix Design	O
CEGS-02238	Waybills and Delivery Tickets	O
CEGS-02239	Test Results	T
CEGS-02239	Bituminous Materials	C
CEGS-02239	Sample Test Results	T
CEGS-02239	Mix Design	O
CEGS-02240	Test Results	T
CEGS-02240	Density Test/Calibration Data	T
CEGS-02240	Mix Design	O
CEGS-02240	Waybills and Delivery Tickets	O
CEGS-02241	Test Results	T
CEGS-02241	Density Test/Calibration Data	T
CEGS-02241	Waybills and Delivery Tickets	O
CEGS-02241	Notification of Aggregate Selection	O
CEGS-02242	Aggregates	S, T
CEGS-02242	Waybills and Delivery Tickets	O
CEGS-02242	Aggregates	S, T, O
CEGS-02242	Bituminous Materials	T
CEGS-02360	Detail Drawings	SD
CEGS-02360	Pile Driving Equipment Description	O
CEGS-02360	Record of Driven Piles	T, O
CEGS-02360	Mill Test Reports	C
CEGS-02360	Test Pile Report	T
CEGS-02360	Load Test Report	T
CEGS-02361	Shop Drawings	SD
CEGS-02361	Pressure Treated Piles	C
CEGS-02361	Untreated Piles	C
CEGS-02361	Preservative Treatment	C
CEGS-02361	Preservative Treatment	C
CEGS-02361	Load Tests	T
CEGS-02361	Records of Driven Piles	O
CEGS-02362	Shop Drawings	SD
CEGS-02362	Equipment Description	O
CEGS-02362	Records of Driven Piles	O
CEGS-02362	Methods and Details of Curing	O
CEGS-02362	Load Test	T
CEGS-02362	Strength Test	T
CEGS-02363	Shop Drawings	SD
CEGS-02363	Records of Driven Piles	O
CEGS-02363	Equipment Description	O
CEGS-02363	Load Test	T
CEGS-02363	Evidence of Pile Driving Experience	O
CEGS-02365	Shop Drawings	SD
CEGS-02365	Records of Driven Piles	O
CEGS-02365	Test Pile Reports	T
CEGS-02365	Collars or Bands	M

CEGS-02365	Metal Shoes	M
CEGS-02365	Welder Qualifications	C
CEGS-02366	Shop Drawings	SD
CEGS-02366	Records of Driven Piles	O
CEGS-02366	Test Pile Report	T
CEGS-02371	Evidence of Pile Driving Experience	O
CEGS-02371	Shop Drawings	SD
CEGS-02371	Records of Placed Piles	T, O
CEGS-02371	Grouting Procedures	O
CEGS-02383	Evidence of Experience	O
CEGS-02383	Survey of Caisson Locations	C
CEGS-02383	Records of Caissons	O
CEGS-02383	Reinforcing Steel	C, O
CEGS-02383	Welding	C, O
CEGS-02383	Penetration Tests	T
CEGS-02383	Load Tests	T
CEGS-02450	Rails, Ties and Accessories	C
CEGS-02450	Ballast	T
SPK-2490	Planted Stock	G
CEGS-02511	Test Reports	T
CEGS-02511	Delivery Tickets	C
SPD-02513	Aggregate	O
SPD-02513	Job Mix Formula	O
SPD-02513	Pavement	S
CEGS-02515	Aggregate	S
CEGS-02515	Materials for Mixture Studies	S
CEGS-02515	Aggregate	S
CEGS-02515	Epoxy Resin Material	C, T
CEGS-02515	Batch Plant Data and Details	O
CEGS-02515	Mixer Details	O
CEGS-02515	Hauling Equipment Data	O
CEGS-02515	Placing Equipment Data	O
CEGS-02515	and Methods	O
CEGS-02515	Proposed Supporting Method	O
CEGS-02515	Curing Media, Data and Methods	M, O
CEGS-02515	Cold Weather Protection Methods	O
CEGS-02515	Hot Weather Protection Methods	O
CEGS-02515	CQC Reports	T, O
CEGS-02515	Aggregate Sources, Mix Design, Tests	T, O
CEGS-02530	Drainage Filter Course	T
CEGS-02530	Stone Foundation	T
CEGS-02530	Clay Foundation	T
CEGS-02530	Wearing Course	S
CEGS-02530	Bituminous Mix Formula	O
CEGS-02530	Mixing Plant Data	O

CEGS-02551	Waybills and Delivery Tickets	O
CEGS-02552	Test Results	T
CEGS-02552	Waybills and Delivery Tickets	O
CEGS-02552	Job Mix Formula	O
CEGS-02554	Test Results	T
CEGS-02554	Wearing Course	S, T
CEGS-02554	Waybills and Delivery Tickets	O
CEGS-02554	Job Mix Formula	O
CEGS-02555	Test Results	T
CEGS-02555	Waybills and Delivery Tickets	O
CEGS-02556	Aggregates	S
CEGS-02556	Aggregates	S
CEGS-02556	Bituminous Materials	S
CEGS-02556	Waybills and Delivery Tickets	O
CEGS-02256	Mix Design Materials	S
CEGS-02557	Aggregates	S
CEGS-02557	Aggregates	S
CEGS-02557	Bituminous Materials	S
CEGS-02557	Waybills and Delivery Tickets	O
CEGS-02557	Mix Design Materials	S
CEGS-02558	Bituminous Material	S
CEGS-02558	Bituminous Material	S
CEGS-02558	Waybills and Delivery Tickets	O
CEGS-02558	Temperature Viscosity Relationship	O
CEGS-02559	Bituminous Material	S
CEGS-02559	Bituminous Material	C, T
CEGS-02559	Calibration Test Results	T
CEGS-02559	Waybills and Delivery Tickets	O
CEGS-02559	Temperature Viscosity Relationship	O
CEGS-02560	Aggregate	S
CEGS-02560	Materials Test Results	T
CEGS-02560	Calibration Test Results	T
CEGS-02560	Waybills and Delivery Tickets	O
CEGS-02560	Aggregate Gradation Limits	T
CEGS-02560	Temperature Viscosity	O
CEGS-02561	Testing	C
CEGS-02561	Calibration Test	T
CEGS-02562	Aggregates	S
CEGS-02562	Aggregates	S
CEGS-02562	Bituminous Materials	S
CEGS-02562	Materials for Design Mix	S
CEGS-02563	Waybills and Delivery Tickets	O
CEGS-02563	Materials	S
CEGS-02563	Materials	C

CEGS-02564	Bituminous Materials	M
CEGS-02577	Paint/Reflective Media	S, T
CEGS-02579	Mix Designs	S
CEGS-02579	Test Reports	T
CEGS-02579	Materials	C
CEGS-02580	Cold Applied Sealant Equipment	M, C
CEGS-02580	Source of Sealants	O
CEGS-02580	Test Results/Recommendations	M, C, T
CEGS-02580	Storage Facilities	M
CEGS-02580	Primers	M
CEGS-02580	Cold-Applied Sealant	M
CEGS-02580	Primer Application	M
CEGS-02581	Cold-Applied Sealant Equipment	M, C
CEGS-02581	Source of Sealants, Test for Primer Band	T, O
CEGS-02581	Test Results, Installation Procedures	M, T
CEGS-02581	Storage Facilities	M
CEGS-02581	Cold-applied Sealant	M
CEGS-02581	Primer Application	M
CEGS-02593	Test Report	T, C
CEGS-02597	Bituminous Materials/Recycling	S, T
SPK-02611	Cement	C

CEGS-02660	Material and Installation	SD, M
CEGS-02660	Pipe, Pipe Fittings, Valves, Hydrants, Hose Houses, Meters	M
CEGS-02660	Name and Qualification, of the Manufacturer's Representative	O
CEGS-02660	Certification of Final Installation	C
CEGS-02660	Method for Disposal of Waste Test Water	O
CEGS-02685	Shop Drawings	SD
CEGS-02685	Instructions	M
CEGS-02670	Drilling Plan	O
CEGS-02670	Logs of Wells	O
CEGS-02670	Test Reports	T
CEGS-02670	Permits	O
CEGS-02670	Notification of Local Authorities	O
CEGS-02710	Filter Fabric, Pipe, Pipe Fittings	S
CEGS-02710	Filter Fabric	C
CEGS-02711	Materials Certifications	C
CEGS-02711	Pipe and Fitting	S
CEGS-02730	Pipings and Fittings, etc	M
CEGS-02730	Frame(s) and Cover(s)	M
CEGS-02732	Tests	T
CEGS-02732	Sample Tests	S, T
CEGS-02751	ASME Compliance	C, O
CEGS-02751	List of Materials and Equipment	M, O
CEGS-02751	Shop Drawings	SD
CEGS-02751	Ejector Capacity/Installation	M, T, O
CEGS-02752	List of Materials and Equipment	M, O
CEGS-02752	Shop Drawings	SD
CEGS-02831	Shop Drawings	SD
CEGS-02831	Materials	O
CEGS-02835	Field Operation Performance History	O
CEGS-02835	Shop Drawings	SD
CEGS-02835	Test Reports	T
CW-02212	Vibratory Rollers	O
CW-02215	Filter Fabric	S
CW-02215	Filter Fabric and Seams	C, O
CW-02311	Equipment Descriptions	O

CW-02311	Record of Driven Piles	T, O
CW-02311	Splice Design	O
CW-02311	Preservative Treatment	C, T
CW-02311	Test Piles	T
CW-02311	Record of Driven Piles	O
CW-02315	Equipment Descriptions	O
CW-02315	Record of Driven Piles	T, O
CW-02315	Steel-Mill Test	C, T
CW-02315	Test Pile Report	T
CW-02411	Equipment Descriptions	O
CW-02411	Shop Drawings	SD
CW-02411	Test Procedure	O
CW-02411	Interlock Gauging	C
CW-02411	Record of Driven Piles	T, O
CW-02541	Stone Fill Material	S, T, O
CW-02541	Gabion Units	C
	DIVISION 3 - CONCRETE	
CW-03150	Joint Materials	C, T
CW-03150	Sealant and Primer	S
CW-03150	Waterstop	S
CEGS-03200	Shop Drawings	SD
CEGS-03200	Mill Reports	C
CW-03210	Radiograph Data	T
CW-03210	Disposition Records	O
CW-03230	Shop Drawings	SD
CW-03230	Materials Test	C, T
CW-03230	Disposition Records	O
CW-03230	Equipment Descriptions	C, T, O
CW-03230	Tensioning Records	O
CEGS-03250	Materials	C
CEGS-03300	Test Reports	C
CEGS-03300	Materials	C
CEGS-03300	Mix Proportions	O
CEGS-03300	Concrete	S, T
CW-03301	Aggregate	S
CW-03301	Concrete Mixture Proportions	T, O
CW-03301	Cement and Pozzolan	M, C, T
CW-03301	Slag	M, C, T
CW-03301	Non-shrink Grout	M, C, T
CW-03301	Non-shrink Grout	M, C, O
CW-03301	Mixture Proportions, Non-shrink Grout	C, T, O
CW-03301	Admixtures and Curing	M, C
CW-03301	Materials	
CW-03301	Batch Plant	O
CW-03301	Mixers	O
CW-03301	Conveying Equipment	O
CW-03301	Placing	O
CW-03301	Joint Clean-up	O

CW-03301	Curing	O
CW-03301	Cold Weather Methods	O
CW-03301	Hot Weather Methods	O
CW-03301	Aggregate Gradations	T, O
CW-03301	Concrete Retarder	S
CW-03301	Test Results	T
CW-03301	Batching Report	O
CW-03301	Result of Inspection Prior to Concrete Placement	O
CW-03301	Adjustments to Batch Weights	O
CEGS-03301	Field Test	T
CEGS-03302	Cement	C
CEGS-03302	Reinforcement	C
CEGS-03302	Shop Drawings	SD
CEGS-03362	Cores	T
CW-03305	Aggregates	S
CW-03305	Curing Materials Data	S, O
CW-03305	Concrete Materials, Pumping Equipment	S, M, T
CW-03305	Cement	T
CW-03305	Pozzolan	T
CW-03305	Non-shrink Grout	M, O
CW-03305	Mixture Proportions	C, T
CW-03305	Plant Layout Drawings	O
CW-03305	Batch Plant Data	O
CW-03305	Mixer Data	O
CW-03305	Conveying Equipment	O
CW-03305	Joint Clean-up	O
CW-03305	Curing Medium and Methods	O
CW-03305	Cold Weather Curing Methods	O
CW-03305	Hot Weather Curing Methods	O
CW-03305	Non-shrink Grout	C, O
CW-03305	Mix Properties	O
CW-03305	Recorded Chart or Tape	O
CW-03305	Concrete Retarder	S
CW-03305	Construction Report Prior to Placing Concrete	O
CW-03305	Construction Reports	T, O
CW-03307	Cementitious Materials	C
CW-03307	Aggregate	T
CW-03307	Admixtures and Curing Materials	M
CW-03307	Mixture Proportions	T, O
CW-03307	CQC Report	T, O
CW-03361	Test Panel	S
CW-03361	Cement and Pozzolan	M
CW-03361	Aggregates	T
CW-03361	Admixtures and Curing Materials	M
CW-03361	Mixture Proportions	T, O
CW-03361	Names and Qualifications of	O

Nozzlemen

CW-03362	Cement Shipment Schedule	T, O
CW-03362	Aggregates	S
CW-03362	Cement and Pozzolan	M, C, T
CW-03362	Grout Mixing Proportions	T, O
CW-03362	Air Entraining Admixture	C
CW-03362	Curing Compound	C
CW-03362	Equipment Data	O
CW-03362	Placement Procedures	O
CW-03362	Curing Medium and Methods	O

CEGS-03414	Shop Drawings	SD
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CEGS-03420	Shop Drawings	SD
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CW-03425	Design Calculations	O
CW-03425	Material Tests	T
CW-03425	Construction Tests	T
CW-03425	Cement	M, C
CW-03425	Pozzolan	M, C
CW-03425	Air Entraining Admixture	M, C
CW-03425	Water Reducing Admixture	M, C
CW-03425	Aggregates	M, C
CW-03425	Air Content of Concrete	M
CW-03425	Concrete Mix Proportions	O
CW-03425	Sample Panel	S
CW-03425	Shop Drawings	SD
CW-03425	Mix Design	T, O
CW-03425	Erection Plan	O

CEGS-03450	Shop Drawings	SD
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CEGS-03450	Certificates of Compliance	C
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CEGS-03450	Maximum Aggregate	O
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CEGS-03450	Size/Mix Design	
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CEGS-03450	Concrete	C, T
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CEGS-03450	Precast Units	S
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CEGS-03450	Manufacturer's Qualifications	M
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CEGS-03510	Concrete Design	C, T
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CEGS-03510	Materials	SD, S,
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M, C

CEGS-03550	Shop Drawings	SD
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CEGS-03550	Test Reports	T
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DIVISION 4 - MASONRY

CEGS-04200	Materials	C, T
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CEGS-04200	Materials	S
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CEGS-04200	Panels	S
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DIVISION 5 - METALS

CEGS-05055	Welding Qualifications	T, O
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Procedures

CEGS-05055	Welding Procedure and Records	T, O
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CEGS-05055	Welder Qualifications	C
CEGS-05055	Renewal Qualifications	C
CEGS-05055	Records of Operations	O
CEGS-05061	Search Unit Angle/Shear Wave Angle	O
CEGS-05061	Personnel Qualifications	C, O
CEGS-05061	Working Standards Details	O
CEGS-05061	Reports and Records	T, O
CEGS-05062	Welding Procedures	SD,T,O
CEGS-05062	Changes in ProceduresT,	O
CEGS-05062	Personnel Qualifications	C, O
CEGS-05062	Reports and Records	T, O
CEGS-05120	Test Results and Qualifications	C, T, O
CEGS-05120	Shop Drawings	SD
CEGS-05210	Design and Manufacture of Steel Joists and Girders	C, O
CEGS-05210	Shop Drawings	SD
CEGS-05300	Shop Drawings	SD
CEGS-05300	Design Computations/ Certifications	C, O
SPK-05330	Shop Drawings	SD
SPK-05330	Design Computations	O
SPK-05400	Shop Drawings	SD
CEGS-05500	Shop Drawings	SD
CEGS-05500	Materials	S
CW-05501	Materials	S
CW-05501	Shop Drawings	SD
CW-05501	List of Materials	C, O
CW-05501	Schedule of Welding Procedures	O
CW-05501	Material and Welding Requirements	C, T
CW-05501	Disposition Records	O
CW-05501	Flame Cutting	SD
CW-05501	Welding Procedures	O
CW-05501	Patterns	O
CW-05501	Welding Procedures	O
CW-05501	Welder Certification	C
CW-05501	Schedule of Welding Procedures	O
CW-05501	Welding Repair Plans	O
CW-05501	Schedule of Welding Procedures	O
CW-05501	Welding Qualifications	C, T
CW-05501	Stud Welding	C, T
CW-05501	Stud Application	C, T
CW-05501	Computed Weights	SD
CW-05501	Shipping Lists	O

CW-05502	Shop Drawings, Samples, Lists of Materials, Test Results, Disposition Records	SD, S, C, T
CW-05502	Railing Calculations	O
CW-05550	Shop Drawings, Samples, Lists of Materials, Test Reports,	SD, S, C, T
CW-05550	Welding Procedures	O
CW-05550	Marking Diagram and Radiographs	O
CW-05561	Shop Drawings, Samples, Lists of Materials, Test Reports, Welding Procedures, Disposition Records, Diagonals Prestressing Plan and Records, CQC Reports	SD, S, C, T
CW-05561	Materials Tests	T
CW-05561	Disposition Records	O
CW-05561	Record of Prestressing Diagonals	T
CW-05561	Record of Prestressing Operations	O

CW-05562	Shop Drawings, Samples, Lists of Materials, Materials Test Reports, Welding Procedures, Disposition Records, CQC Reports	SD, S, C, T
CW-05562	Materials Test	T
CW-05562	Disposition of Tested Materials	O
CW-05563	Shop Drawings	SD
CW-05563	Samples	S
CW-05563	List of Materials	O
CW-05563	Materials Test	T
CW-05563	Disposition of Tested Materials	O
CW-05563	Prestressing Data	T, O
CW-05563	Prestressing Technician Certification	C
CW-05563	Prestressing Record	O
CW-05567	Records of CQC Inspections	O
CW-05567	Shop Drawings, Samples, Materials Tests, Welding Procedures, CQC Reports	SD, S, C, T
CW-05567	Materials Tests	T
CW-05567	Operations and Test Results	T, O
CW-05567	Gate Assembly	G
CW-05568	Records of CQC Inspection	O
CW-05568	Shop Drawings, Samples, Materials Tests, Welding Procedures, CQC Reports	SD, S,
CW-05568	Materials Tests	T
CW-05568	Operation and Test Results	T, O
CW-05568	Gate Assembly	G
CW-05569	CQC Records	O
CW-05569	Shop Drawings, Samples,	SD, S, C, T
CW-05569	Materials Tests, Welding Procedures, CQC Reports	
CW-05569	Materials Tests	C, T
CW-05569	Operation and Test Results	T, O
CW-05569	Gate Assembly	G

DIVISION 6 - WOOD AND PLASTICS

CEGS-06100	Materials	S
CEGS-06100	Shop Drawings	SD
CEGS-06100	Computations for Insulation	O
CEGS-06200	Shop Drawings	SD
CEGS-06200	Materials and Accessories	S, M
SPK-06410	WIC Certifications	

SPK-06410	Shop Drawings	SD
DIVISION 7 - THERMAL AND MOISTURE PROTECTION		
CEGS-07111	Materials	C
CEGS-07111	Installation Instructions	M
CEGS-07111	Mixing and Application Data	M
CEGS-07111	Membrane, Sealant, Splicing Cement	S
CEGS-07111	Shop Drawings	SD
CEGS-07112	Materials	C
CEGS-07112	Installation Instructions	M
CEGS-07112	Mixing and Application Data	M
CEGS-07140	Mixing and Application Data	M
CEGS-07140	Metallic Waterproofing	C, T
CEGS-07140	Materials	C, O
CEGS-07160	Materials	M
SPK-07220	Computations	O
SPK-07220	Materials	M
SPK-07220	Bitumen	S
SPK-07220	Manufacturer's Literature	S
SPK-07220	Reports	O
CEGS-07240	Manufacturer's Data	M
CEGS-07240	Materials and Accessories	S
CEGS-07240	Test	T
CEGS-07250	Materials	S
CEGS-07250	Application	O
CEGS-07250	Test Report	T
CEGS-07250	Manufacturer's Data	M
CEGS-07270	Shop Drawings	SD, M, C, T
CEGS-07311	Roofing Materials	M
CEGS-07413	Shop Drawings	SD
CEGS-07413	Panels	S
CEGS-07415	Shop Drawings	SD
CEGS-07415	Panels	C
CEGS-07415	Materials	S
SPK-07416	Shop Drawings	SD
SPK-07416	Calculations	O
SPK-07416	Materials	S
SPK-07416	Guarantee/Warranty	G
CEGS-07510	Bitumen	S
CEGS-07510	Materials	M
CEGS-07510	CQC Procedure	O
CEGS-07530	Materials	C
CEGS-07530	Installation Instructions	O
CEGS-07530	Membrane, Sealant, Splicing	S

	Cement	
CEGS-07530	Shop Drawings	SD
CEGS-07530	CQC Procedures	O
CEGS-07540	Insulation Calculations	O
CEGS-07540	Materials and System	C
CEGS-07540	Installation Instructions	M
CEGS-07540	Materials	S
CEGS-07550	Computations	O
CEGS-07550	Test Reports	T
CEGS-07550	Documentations	O
CEGS-07555	Materials	C
CEGS-07555	Instructions	M
CEGS-07555	Shop Drawings	SD
CEGS-07555	Warranty	G
CEGS-07600	Materials	M
CEGS-07600	CQC Procedures	O
CEGS-07720	Shop Drawings	SD
CEGS-07920	Calking and Sealants	C
CEGS-07920	Material	M
CEGS-07920	Calking and Sealants	S
DIVISION 8 - DOORS AND WINDOWS		
CEGS-08110	Shop Drawings	SD
CEGS-08110	Test Reports	C, T
CEGS-08110	Oversized Fire Doors	C
CEGS-08120	Shop Drawings	SD
CEGS-08120	Installation Instructions	M
CEGS-08120	Coating	S
CEGS-08120	Test Reports	C, T
CEGS-08120	Calculations	O
CEGS-08201	Shop Drawings	SD
CEGS-08201	Oversized Fire Doors	C
CEGS-08201	Natural Finish	C
CEGS-08312	Shop Drawings	SD
CEGS-08312	Installation Instructions	M
CEGS-08312	Oversized Fire Doors	C
CEGS-08313	Sliding Glass Doors	O
CEGS-08313	Installation Instructions	M
CEGS-08313	Shop Drawings	SD
SPK-08316	Shop Drawings	SD
CEGS-08318	Manufacturer's Data	M, C
CEGS-08325	Doors and Frames	C
CEGS-08325	Shop Drawings	SD, M, O

CEGS-08330	Shop Drawings	SD
CEGS-08330	Installation Instructions	M
CEGS-08330	Oversized Fire Doors	C
CEGS-08331	Shop Drawings	SD
CEGS-08331	Installation Instructions	M
CEGS-08353	Shop Drawings, Color Chart	SD, M, O
CEGS-08353	Materials	O
CEGS-08360	Shop Drawings	SD
CEGS-08360	Installation Instructions	M
CEGS-08365	Shop Drawings	SD
CEGS-08365	Installation Instructions	M
CEGS-08510	Shop Drawings	SD, O
CEGS-08510	Prime Windows	C
CEGS-08520	Shop Drawings	SD, O
CEGS-08520	Prime and Storm Windows	C
CEGS-08520	Installation Instructions	M
CEGS-08521	Shop Drawings	SD
CEGS-08521	Performance/Testing	C, T
CEGS-08610	Shop Drawings	SD, O
CEGS-08610	Windows/Performance	C
CEGS-08610	Installation Instructions	M
CEGS-08615	Shop Drawings	SD, O
CEGS-08615	Materials	M
CEGS-08615	Installation Instructions	M
CEGS-08620	Shop Drawings	SD
CEGS-08620	Prime Windows	C
CEGS-08620	Installation Instructions	M
CEGS-08700	Hardware	C
CEGS-08700	Hardware Schedule	M, O
CEGS-08700	Keying Schedule	O
CEGS-08701	Departures from Specifications	O
CEGS-08701	Shop Drawings, Manufacturer's Literature, Catalog Cuts	SD, M, O
CEGS-08701	Lock, Key, Gang Locking Device	S, O
CEGS-08810	Installation Instructions	M
CEGS-08810	Glass	C
CEGS-08810	Insulating Glass Units	M
CEGS-08840	Acrylic Plastic Sheets/ Glazing Material	C

DIVISION 9 - FINISHES

CEGS-09200	Shop Drawings	SD
CEGS-09225	Shop Drawings	SD
CEGS-09225	Lath	M
CEGS-09215	Shop Drawings	SD
CEGS-09215	Gypsum Base and Veneer Plaster	M
CEGS-09215	Steel Framing and Partitions	C
CEGS-09250	Shop Drawings	SD
CEGS-09250	Steel Framing and Wallboard	C
CEGS-09310	Mortar, Resin, Tile	C
CEGS-09310	Tile and Accessories	S
CEGS-09310	Electrical Resistance	T
CEGS-09411	Terrazzo, Divider Strips	S
CEGS-09411	Shop Drawings (including System Data)	SD, M
CEGS-09431	Resinous Floor Coating	C, T
CEGS-09431	Mixing, Proportioning and Installation Instructions	M
CEGS-09431	Resinous Terrazzo	S
CEGS-09431	Shop Drawings	SD
CEGS-09431	Conductive Flooring	T
CEGS-09433	Resinous Floor Coating	C, T
CEGS-09433	Resinous Floor Coating	M
CEGS-09433	Resinous Floor Coating	S
CEGS-09433	Shop Drawings	SD
CEGS-09433	Electrical Resistance	T
CEGS-09433	Spark Resistance	T
CEGS-09445	Shop Drawings	SD
CEGS-09445	Installation Instructions	M
CEGS-09445	Test Reports	T, C
CEGS-09510	Acoustical Material	M
CEGS-09510	Acoustical Unit	S
CEGS-09510	Shop Drawings	SD
CEGS-09560	Strip Flooring	S
CEGS-09560	Data and Installation Instructions	M

CEGS-09570	Parquet Flooring	S
CEGS-09570	Data and Installation Instructions	M
CEGS-09650	Vinyl Flooring	S
CEGS-09650	Data and Installation Instructions	M
CEGS-09650	Vinyl Flooring	T
CEGS-09650	Wall Base	M
CEGS-09675	Data and Installation Instructions	M
CEGS-09675	Conductive Vinyl Tile	S
CEGS-09680	Carpet Installation Instructions	M
CEGS-09680	Carpet	S
CEGS-09680	Carpet	C
SPK-09682.1	Installation Instructions	M
SPK-09682.1	Carpet	S
SPK-09690	Shop Drawings	SD
SPK-09690	Test Reports	T, C
SPK-09690	Installation Instructions	M
SPK-09690	Maintenance Manual	O
SPK-09690	Carpet Tile/Moldings	S
CEGS-09706	Resinous Floor Coating	C, T
CEGS-09706	Data, Mixing, Proportioning and Installation Instructions	M
CEGS-09706	Resinous Flooring	S
CEGS-09706	Shop Drawings	SD
CEGS-09900	Lead Content	C
CEGS-09900	Manufacturer's Data	M
CEGS-09900	Materials	S
CEGS-09900	Test	T
CEGS-09900	Paint	S, O
CW-09940	Paint	S
CW-09940	Special Paints and Thinners	S, M, C
CW-09940	Federal and Military Specifications Paints and Thinners	S, C, T, O
CW-09940	Proprietary Paints	M, C
CW-09940	Paint	S, O
CW-09940	Paint	S, O
CW-09940	Paint	S, O
CW-09940	Paint	S, O
CW-09940	Paint	S, O
CW-09940	Paint	S, O
CW-09940	Old Paint and Thinner	S

CEGS-09960	Wall Covering	S
CEGS-09960	Data and Installation	M
	Instructions	
CEGS-09960	Wainscot Cap	M

DIVISION 10 - SPECIALTIES

CEGS-10160	Description (Color)	M
CEGS-10160	Shop Drawings	SD
CEGS-10270	Descriptive Data	M
CEGS-10270	Shop Drawings	SD

CEGS-10270	Manufacturer's Standard Color, Floor Finish and Sample Panel	S
CEGS-10270	Design Calculations	O
CEGS-10270	Certificate of Compliance	C
CEGS-10270	Testing	T
CEGS-10270	Components	M
CEGS-10440	Manufacturer's Data	M
CEGS-10440	Shop Drawings	SD
CEGS-10440	Signs	S
SPK-10552	Shop Drawings	SD
CEGS-10615	Demountable Partitions	M
CEGS-10615	Demountable Partitions	C
CEGS-10615	Shop Drawings	SD
CEGS-10615	Demountable Partitions	S
CEGS-10800	Samples and Descriptive Data	S, M, O
CEGS-10900	Shop Drawings	SD
CEGS-10900	Samples	S
CEGS-10900	Test Result(s)	T
CEGS-10900	Hardware Requirements	M
CEGS-10900	General (Wood Wardrobe)	C, O
DIVISION 11 - EQUIPMENT		
CEGS-11022	Installation Instructions	M
CEGS-11022	Vault Door Unit	C
CEGS-11140	Shop Drawings, etc	SD, O
CEGS-11140	Framed Instructions	O
CEGS-11140	Tests	T
CEGS-11140	Storage Tank(s)	M
CEGS-11140	Tank Accessories	M
CEGS-11140	Dispensing Unit(s) and pump(s)	M
CEGS-11140	Coating(s) for Steel Tanks	M
CEGS-11162	Concrete Pit	SD
CEGS-11162	Installation	SD, M, O
CEGS-11181	Shop Drawings, etc	SD, O, M
CEGS-11181	Framed Instructions	O
CEGS-11181	Tests	T
CEGS-11182	Shop Drawings, etc.	SD, O, M
CEGS-11182	Framed Instructions	O
CEGS-11182	Tests	T
CEGS-11211	Shop Drawings	SD, M, O
CEGS-11211	Instructions	M
CEGS-11211	Tests	T
CEGS-11211	Pumps	M

CEGS-11212	Shop Drawings	SD
CEGS-11212	Test(s)	T
CEGS-11212	Line Shaft Vertical Pump(s)	M
CEGS-11212	Submersible Vertical Turbine Pump(s)	M
CEGS-11212	Pump Accessories	M
CEGS-11212	Electrical Equipment	M
CEGS-11212	Diesel Engine(s)	M
CEGS-11212	Gasoline Engine(s)	M
CEGS-11212	Cooling System(s)	M
CEGS-11212	Exhaust System(s)	M
CEGS-11212	Air Intake Equipment	M
CEGS-11212	Batteries	M
CEGS-11212	Battery Charger(s)	M
CEGS-11212	Safety Control	M
CEGS-11212	Instrument Panel(s)	M
CEGS-11212	Engine Control(s)	M
CEGS-11212	Fuel Tank(s)	M
CEGS-11212	Test(s)	T
CEGS-11241	Shop Drawings, etc	SD, O
CEGS-11241	Framed Instructions	O
CEGS-11241	Tests	T
CEGS-11241	Chlorine Feeding Machine(s)	M
CEGS-11241	Evaporator(s)	M
CEGS-11242	Shop Drawings, etc	SD, M, O
CEGS-11242	Framed Instructions	O
CEGS-11242	Test(s)	T
CEGS-11242	Hypochlorite-feeding Machine	M
CEGS-11250	Shop Drawings	SD
CEGS-11250	Test(s)	T
CEGS-11250	Softening Equipment	M
CEGS-11250	Brine Applications System(s)	M
CEGS-11250	Controls	M
CEGS-11250	Water Meter(s)	M
CEGS-11250	Automatic Hardness Tester	M
CEGS-11250	Water and Brine Testing Equipment	M
CEGS-11250	Results	T
CEGS-11310	Tests	T
CEGS-11310	Shop Drawings	SD
CEGS-11310	Test(s)	T
CEGS-11310	Seal Water System(s)	M

CEGS-11310	Centrifugal Solids Handling Pumps	M
CEGS-11310	Submersible Centrifugal Pumps	M
CEGS-11310	Self-priming Centrifugal Pumps	M
CEGS-11310	Screw Pump(s)	M
CEGS-11310	Plunger Pump(s)	M
CEGS-11310	Progressive Cavity Pump(s)	M
CEGS-11310	Diaphragm Pump(s)	M
CEGS-11310	Recessed Impeller Pump(s)	M
CEGS-11330	Shop Drawings, etc	SD, O
CEGS-11330	Framed Instructions	O
CEGS-11330	Tests	T
CEGS-11330	Mechanically Cleaned Bar Screen	M
CEGS-11330	Mechanical Shredder, Cutter or Grinder	M
CEGS-11334	Shop Drawings, etc	SD, M, O
CEGS-11334	Framed Instructions	O
CEGS-11334	Tests	T
CEGS-11350	Shop Drawings, etc	SD, M, O
CEGS-11350	Framed Instructions	O
CEGS-11350	Tests	T
CEGS-11365	Shop Drawings	SD, M
CEGS-11375	Welding Procedures and Welders	O
CEGS-11375	Shop Drawings, etc	SD, O
CEGS-11375	Framed Instructions	O
CEGS-11375	Factory Tests	T
CEGS-11375	Performance Tests	T
CEGS-11375	Pipe and Fittings	M
CEGS-11375	Air-Supply Equipment	M
CEGS-11375	Air Distribution System	M
CEGS-11375	Diffusers	M
CEGS-11375	Hoist(s)	M
CEGS-11380	Shop Drawings, etc	SD, O
CEGS-11380	Framed Instructions	O
CEGS-11380	Tests	T
CEGS-11380	Digester Gas Handling System	M
CEGS-11380	Digester Heating System	M
CEGS-11380	Oil Storage Tank(s)	M
CEGS-11380	Oil Circulating Pump(s)	M
CEGS-11380	Mechanical Sludge Mixing System	M
CEGS-11380	Compressed Gas Sludge Mixing System	M
CEGS-11390	Shop Drawings, etc	SD, M, O
CEGS-11390	Framed Instructions	O
CEGS-11390	Tests	T
CEGS-11400	General Standards	M, O

CEGS-11400	Shop Drawings	SD, M, O
CEGS-11400	Tests	T
CEGS-11400	Counters	M, O
CEGS-11400	Sinks	M, O
CEGS-11400	Utility Distribution System	M, O
CEGS-11400	Pre-fab Walk-in Refrigerator	M, O
CEGS-11400	Gas-burning Equipment	M, O
CEGS-11400	Water Filter	M, O
CEGS-11400	Paint and Coatings	M, O
CEGS-11400	Installation	M, O
CEGS-11710	Shop Drawings	SD
CEGS-11710	Performance Test Report(s)	T, O
CEGS-11710	Factory Testing	T, M
CEGS-11710	Materials	M
CEGS-11710	Prevac Sterilizers	M, O
CEGS-11710	Ethylene Oxide Sterilizer(s)	M, O
CEGS-11710	Loading Car	M
CEGS-11710	Gas Aerators	M
CEGS-11710	Automatic Sterilizers	M
CEGS-11710	Bedpan Washer-Sanitizer	M
CEGS-11710	Lab Distilling Apparatus	M
CEGS-11710	Solution Warming Cabinets	M

DIVISION 12 - FURNISHINGS

CEGS-12335	Shop Drawings	SD
CEGS-12335	Samples	S
CEGS-12335	Certificates of Compliance	C
CEGS-12335	Medical Casework	M
CEGS-12335	Dental Casework	M
CEGS-12390	Shop Drawings	SD, M, O
CEGS-12390	Samples	S, O
CEGS-12520	Shop Drawings	SD, M, O
CEGS-12520	Samples	S
SPK-12513	Product Warranty	G
CEGS-12540	Shop Drawings	SD, M
CEGS-12540	Samples	S
CEGS-12710	Shop Drawings	SD
CEGS-12710	Samples	S
CEGS-12710	Descriptive Data	M
CE-0201.01	Shop Drawings	SD, M, O
CE-0201.01	Samples and Descriptive Data	S, M
CE-0201.01	Guarantee	G

DIVISION 13 - SPECIAL CONSTRUCTION

CEGS-13080	Shop Drawings	SD, O
CEGS-13080	Tests	T

CEGS-13120	Shop Drawings	SD
CEGS-13120	Materials	C
CEGS-13120	Materials	S
CEGS-13206	Shop Drawings	SD, O
CEGS-13206	Tests	T, C
CEGS-13210	Shop Drawings	SD, O
CEGS-13210	Design Calculations	
CEGS-13210	Tests	T
CEGS-13210	Certification	C
CEGS-13210	VOC Analysis/Tests	T, C, O
CEGS-13211	Shop Drawings and Calculations	SD, O
CEGS-13211	Tests	T
CEGS-13211	Cleaning	O
CEGS-13234	Shop Drawings	SD, M, O
CEGS-13234	Test(s)	T
CEGS-13234	Insulation Calculations	O
CEGS-13600	Shop Drawings, etc	SD, O
CEGS-13600	Tests	T
CEGS-13600	Brazing Alloy(s)	M
CEGS-13600	Expansion Joint(s)	M
CEGS-13600	Solar Collector(s)	M
CEGS-13600	Heat Transfer Fluid(s)	M
CEGS-13600	Heat Exchanger(s)	M
CEGS-13600	Radiator(s)	M
CEGS-13600	Fan Coil Unit(s)	M
CEGS-13600	Air Handling Unit(s)	M
CEGS-13600	Pump(s)	M
CEGS-13600	Tank(s), Closed Expansion	M
CEGS-13600	Liquid Storage Tank(s)	M
CEGS-13600	Hot Water Storage Tank(s)	M
CEGS-13600	Controls and Instrumentation	M
CEGS-13600	Expansion Joint(s)	M
CEGS-13750	Shop Drawings	SD
CEGS-13750	Testing Survey Report	T
CEGS-13814	Shop Drawings, etc	SD, O, M
CEGS-13814	Test Plan(s) and Procedure(s)	O
CEGS-13814	Test Report(s)	T
CEGS-13810	FCC Class A Computing Device Verification	O
CEGS-13810	Testing Submittals	T, O
CEGS-13810	Data Entry Forms	O
CEGS-13810	Testing	T
CEGS-13810	Data Transmission Media Test Report	T
CEGS-13810	Field Equipment	SD, M
CEGS-13810	System Equipment	SD, M
CEGS-13810	System Software	M
CEGS-13810	Command Software	M

CEGS-13810	Application Programs	M
CEGS-13810	CCC Software	M
CEGS-13810	FID Software	M
CEGS-13811	FCC Class A Computing Device Verification	O
CEGS-13811	Testing Submittals	T, O
CEGS-13811	Data Entry Forms	O
CEGS-13811	Existing Controls Report	O
CEGS-13811	Testing	T
CEGS-13811	Data Transmission Media Test Report	T
CEGS-13811	Field Equipment	SD, M
CEGS-13811	System Equipment	SD, M
CEGS-13811	System Software	M
CEGS-13811	Command Software	M
CEGS-13811	Applications Programs	M
CEGS-13811	FID Software	M
CEGS-13811	Existing Controls Report	O
CEGS-13812	FCC Class A Computing Device Verification	O
CEGS-13812	Testing Submittals	T, O
CEGS-13812	Data Entry Forms	O
CEGS-13812	Existing Controls Report	O
CEGS-13812	Testing	T
CEGS-13812	Data Transmission Media Test Report	T
CEGS-13812	Field Equipment	SD, M
CEGS-13812	System Equipment	SD, M
CEGS-13812	System Software	M
CEGS-13812	Command Software	M
CEGS-13812	Applications Programs	M
CEGS-13812	FID Software	M
CEGS-13812	Existing Controls Report	O
CEGS-13813	FCC Class A Computing Device Verification	O
CEGS-13813	Testing Submittals	T, O
CEGS-13813	Data Entry Forms	O
CEGS-13813	Existing Controls Report	O
CEGS-13813	Testing	T
CEGS-13813	Data Transmission Media Test Report	T
CEGS-13813	Field Equipment	SD, M
CEGS-13813	System Equipment	SD, M
CEGS-13813	System Software	M
CEGS-13813	Applications Program	M

DIVISION 14 - CONVEYING SYSTEMS

CEGS-14200	Freight Elevator Platform and Sling	SD, M
CEGS-14200	Passenger Elevator Door Hangers	SD, M
CEGS-14200	Passenger Elevator Door	M

CEGS-14200	Operators Freight Elevator Door and Gate Operators	M
CEGS-14250	Elevator Shop Drawings	SD
CEGS-14250	Passenger Elevator Car	SD, M
CEGS-14250	Freight Elevator Car	SD, M
CEGS-14250	Passenger Elevator Entrances	SD, M
CEGS-14250	Freight Elevator Entrances	SD, M
CEGS-14250	Freight Elevator Operating and Signal Devices	SD, M
CEGS-14250	Automatic Emergency Power Operation	M
CEGS-14250	Passenger Car Operation (Single-car Selective Collective)	M

CEGS-14250	Passenger Car Operation (Two-car Selective Collective)	M
CEGS-14250	Hospital Emergency Service	M
CEGS-14250	Freight Car Operation (Power Door Operation)	M
CEGS-14250	Fire Service	M
CEGS-14250	Elevator Power Unit	SD, M
CEGS-14250	Automatic Leveling Device	M
CEGS-14250	Jack Unit	M
CEGS-14250	Guides and Guide Rails	SD, M
CEGS-14250	Supporting Structure	SD
CEGS-14250	Buffers	SD, M
CEGS-14250	Passenger Elevator Platform and Sling	SD, M
CEGS-14250	Freight Elevator Platform and Sling	SD, M
CEGS-14250	Passenger Elevator Door Hangers	SD, M
CEGS-14250	Passenger Elevator Door Operators	M
CEGS-14250	Freight Elevator Door and Gate Operators	M
CEGS-14630	Shop Drawings	SD, O
CEGS-14630	Instructions	O
CEGS-14630	Tests	T
CEGS-14580	Shop Drawings, etc	SD, M, O

DIVISION 15 - MECHANICAL

CE-0302.01	Shop Drawings, etc	SD, O
CE-0302.01	Welding Procedures and Welders	O
CE-0302.01	Compressor Unit(s)	M
CE-0302.01	Condensing Unit(s)	M
CE-0302.01	Air Cooled Condenser(s)	M
CE-0302.01	Evaporative Condenser(s)	M
CE-0302.01	Water-cooled Condenser(s)	M
CE-0302.01	Receiver(s)	M
CE-0302.01	Cooling Tower(s)	M
CE-0302.01	Evaporator(s)	M
CE-0302.01	Shut Off Valve(s) for Fluorocarbons	M
CE-0302.01	Solenoid Valve(s) for Fluorocarbons	M
CE-0302.01	Expansion Valve(s) Fluorocarbons	M
CE-0302.01	Filter-driers	M
CE-0302.01	Moisture Indicator Sight Glass(es)	M
CE-0302.01	Separator(s) for Fluorocarbons	M
CE-0302.01	Back-Pressure Regulating Valve(s) for Fluorocarbons	M
CE-0302.01	Solenoid Valve(s) for Ammonia	M
CE-0302.01	Expansion Valve(s) for Ammonia	M
CE-0302.01	Separator(s) for Ammonia	M

CE-0302.01	Back-Pressure Valve(s) for Ammonia	M
CE-0302.01	Temperature Controls	M
CE-0302.01	Control Settings	M
CE-0302.01	Test(s)	T
CE-0302.01	Framed Instructions	O
CE-2206	Tests	T
CE-2206	Drawings, etc	SD, M
CE-2303.01	Drawings, etc	SD, O
CE-2303.01	Factory Tests	T
CE-2308	Grease Lubrication System	M
CE-2309	Dehumidification System	M
SPK-15060	Tests	T, C
SPK-15060	Instructions	O
SPK-15060	Installation Procedures	C, O
CEGS-15052	Welder Procedure Qualifications	C
CEGS-15052	Nondestructive Examination (NDE)	O
CEGS-15052	NDE Personnel Certification Procedures	O
CEGS-15052	Inspector Certification(s)	C
CEGS-15052	NDE Personnel Certificate(s)	C
CEGS-15052	Shop Drawings	SD
SPK-15175	Shop Drawings	SD, O
SPK-15175	Permits	O
SPK-15175	Welding Procedures and Qualifications	O
SPK-15175	Instructions	M
SPK-15175	Test	T
CEGS-15250	Shop Drawings	SD, O
CEGS-15250	Cutaway Section Display	S
CEGS-15250	Class 2 Adhesive	M
CEGS-15250	Class I Adhesive	M
CEGS-15250	Bedding Compound	M
CEGS-15250	Mineral Fiber Thermal	M
CEGS-15250	Insulating Cement	M
CEGS-15250	Insulation for Duct	M
CEGS-15250	Insulation for Duct	M
CEGS-15250	Insulation for Duct	M
CEGS-15250	Insulation for Cold Equipment	M
CEGS-15250	Insulation for Hot Equipment	M
CEGS-15250	Glass Tape	M
CEGS-15250	Glass Cloth	M
CEGS-15250	Vapor Barrier Jacket for Equipment	M
CEGS-15250	Vapor Barrier Jacket for Pipe	M
CEGS-15250	Vapor Barrier Jacket for Duct	M
CEGS-15250	Aluminum Jacket	M

CEGS-15250	Insulation for Belowground Pipes	M
CEGS-15250	Insulation for Aboveground Pipelines	M
CEGS-15250	Insulation for Aboveground Pipelines	M
CEGS-15250	Vapor Barrier Coating	M
CEGS-15365	Shop Drawings	SD, O
CEGS-15365	Test	T
CEGS-15365	Instructions	M
CEGS-15365	Test	T
CEGS-15365	Test	T
CEGS-15488	Welding Procedures and Names	O
CEGS-15488	Pipe and Fittings, etc	M
CEGS-15488	Drawings	SD
CEGS-15488	Tanks	M
CEGS-15488	Water Heaters	M
CEGS-15488	Pressure Regulators	M
CEGS-15488	Meters	M
CEGS-15488	Water Heaters	G
CEGS-15400	Backflow Preventer(s)	M
CEGS-15400	Welding Procedures and Names	*O
CEGS-15400	Shop Drawings	SD
CEGS-15400	Handicapped Water Closet(s) and Trim	M
CEGS-15400	Non-Handicapped Water Closet(s) and Trim	M
CEGS-15400	Mixing Valve(s)	M
CEGS-15400	Bathtub(s) and Trim	M
CEGS-15400	Can Rinser-sanitizer(s)	M
CEGS-15400	Combination Tub(s) and Sink(s) and Trim	M
CEGS-15400	Drinking Fountain(s) and Trim	M
CEGS-15400	Food Waste Disposer(s)	M
CEGS-15400	Garbage Disposer(s)	M
CEGS-15400	Handicapped Water Closet(s) and Trim	M
CEGS-15400	Kitchen Sink(s) and Trim	M
CEGS-15400	Laboratory Sink(s) and Trim	M
CEGS-15400	Laundry Sinks(s) and Trim	M
CEGS-15400	Lavator(ies) and Trim	M
CEGS-15400	Non-handicapped Water Water Closet(s) and Trim	M
CEGS-15400	Scullery Sink(s) and Trim	M
CEGS-15400	Service Sink(s) and Trim	M
CEGS-15400	Shower(s) and Trim	M
CEGS-15400	Shower-bath Outfit(s)	M
CEGS-15400	Urinal(s) and Trim	M
CEGS-15400	Wash Fountain(s) and Trim	M
CEGS-15400	Backflow Preventer(s)	M
CEGS-15400	Electric Water Cooler(s)	M
CEGS-15400	Grease Interceptor(s)	M
CEGS-15400	Can Rinser-sanitizer(s)	M
CEGS-15400	Dishwashing Machine(s)	M
CEGS-15400	Water Heater(s)	M

CEGS-15400	Tank(s)	M
CEGS-15400	Pump(s)	M
CEGS-15400	Water Pressure Booster System(s)	M
CEGS-15400	Air Compressor(s) and Appurtenances	M
CEGS-15400	Can Rinser-sanitizer(s)	M
CEGS-15400	Handicapped Water Closet(s) and Trim	M
CEGS-15400	Non-handicapped Water Closet(s) and Trim	M
CEGS-15400	Shower-bath Outfit(s)	M
CEGS-15400	Wash Fountain(s) and Trim	M
CEGS-15400	Operational Test	T
CEGS-15410	Welding Procedures and Welders	O
CEGS-15410	Drawings, etc	SD, O
CEGS-15410	Thermostatic Mixing Valve(s) and Cabinet(s)	M
CEGS-15410	Lab Service Fitting(s)	M
CEGS-15410	Fixture(s)	M
CEGS-15410	Electric Water Cooler(s)	M
CEGS-15410	Grease Interceptor(s)	M
CEGS-15410	Can Rinser-sanitizer(s)	M
CEGS-15410	Dishwashing Machine(s)	M
CEGS-15410	Water Heater(s)	M
CEGS-15410	Hot Water Storage Tank(s)	M
CEGS-15410	Sump Pump(s)	M
CEGS-15410	Circulating Pump(s)	M
CEGS-15410	Booster Pump(s)	M
CEGS-15410	Water Pressure Booster Systems	M
CEGS-15410	Air Compressor(s) and Accessories	M
CEGS-15410	Vacuum Pump(s) and Receiver(s)	M
CEGS-15410	Medical Gas System(s)	M
CEGS-15410	Alarm Panel(s)	M
CEGS-15410	Surgical Dispenser(s)	M
CEGS-15410	Evacuation System(s)	M
CEGS-15410	Reverse Osmosis System(s)	M
CEGS-15410	Water Softening Equipment	M
CEGS-15410	Test Schedule for Evacuation System(s)	O
CEGS-15410	Test for Evacuation System(s)	T
CEGS-15410	Plumbing Operational Test(s)	T
CEGS-15488	Welding Procedures and Names	O
CEGS-15488	Pipe and Fittings, etc	M
CEGS-15488	Drawings	SD
CEGS-15488	Tanks	M
CEGS-15488	Water Heaters	M
CEGS-15488	Pressure Regulators	M
CEGS-15488	Meters	M
CEGS-15488	Water Heaters	G
CEGS-15495	Welding Procedures and Names	O

CEGS-15495	Drawings	SD, M
CEGS-15495	Local Instructions	O
CEGS-15495	Test(s)	T
CEGS-15495	Cleaning Procedures(s)	O
CEGS-15495	Pump(s)	M
CEGS-15495	Reservoir(s)	M
CEGS-15495	Cylinder(s)	M
CEGS-15495	Fluid Motor(s)	M
CEGS-15495	Accumulator(s)	M
CEGS-15495	Valve(s)	M
CEGS-15495	Intensifier(s)	M
CEGS-15495	Fluid Cooler(s)	M
CEGS-15495	Filtration Equipment	M
CEGS-15495	Fluid Lines and Fitting(s)	M
CEGS-15495	Hydraulic Fluid	M
CEGS-15495	Shaft Coupling(s)	M
CEGS-15495	Pressure Gage(s)	M
CEGS-15495	Control Component(s)	M
CEGS-15495	Control Console(s) and Valve and Gage Panel(s)	M
CEGS-15495	Motor(s) and Control(s)	M
CEGS-15501	Drawings, etc	SD, O
CEGS-15501	Test	T
CEGS-15501	Nozzle(s)	M
CEGS-15501	Sprinkler(s)	M
CEGS-15501	Alarm Check Valve(s) and Trim	M
CEGS-15501	Dry Pipe Valve(s) and Appurtenances	M
CEGS-15501	Deluge Valve(s) and Appurtenances	M
CEGS-15501	Heat Detector(s) and System	D, M
CEGS-15501	Solenoid Valve(s)	M
CEGS-15501	Rate-of Flow Valve(s)	M
CEGS-15555	Welding Procedures and Welders	O
CEGS-15555	Drawings, etc	SD, M
CEGS-15555	Framed Instructions	O
CEGS-15555	Test(s)	T
CEGS-15555	Generator(s)	M
CEGS-15555	Fuel Burning Equipment	M
CEGS-15555	Combustion Control Equipment	M
CEGS-15555	Instrument and Control Panel(s)	M
CEGS-15555	Nitrogen Pressurization System(s)	M
CEGS-15555	Blowoff System(s)	M
CEGS-15555	Waste Heat Recovery System(s)	M
CEGS-15555	Draft Fan(s)	M
CEGS-15555	Electric-motor Driven Pump(s)	M
CEGS-15555	Expansion Tank(s)	M
CEGS-15555	Heat Exchanger(s)	M
CEGS-15555	Chemical Feeder(s)	M
CEGS-15555	Water Softening Equipment	M
CEGS-15555	Sediment Trap(s) and Blenders	M
CEGS-15555	Line Mixer(s)	M

CEGS-15555	Liquid Level Control Column(s)	M
CEGS-15555	Air Compressor(s)	M
CEGS-15555	Expansion Joint(s)	M
CEGS-15555	Valve(s)	M
CEGS-15555	Backpressure Relief Valve(s)	M
CEGS-15555	Fuel Oil Tank(s)	M
CEGS-15555	Coal Handling Equipment	M
CEGS-15555	Ash Handling Equipment	M
CEGS-15555	Testing Schedule	O
CEGS-15555	Capacity and Efficiency Tests	T
CEGS-15845	Welding Procedures and Welders	O
CEGS-15845	Shop Drawings, etc	SD, M, O
CEGS-15845	Framed Instructions	O
CEGS-15845	Tests	T
CEGS-15845	Heat Recovery Equipment	M
CEGS-15940	Welding Fume Tubing	M
CEGS-15940	Damper(s)	M
CEGS-15940	Suspension System(s)	M
CEGS-15940	Framed Instructions	M
CEGS-15940	Test(s)	T
	DIVISION 16 - ELECTRICAL	
CEGS-16113	List of Materials and Equipment	M
CEGS-16113	Manufacturer's Drawings	SD
CEGS-16113	Contractor's Drawings	SD
CEGS-16113	Materials and Equipment	M
CEGS-16115	Shop Drawings	SD
CEGS-16115	Materials and Equipment	M
CEGS-16224	Welder Qualifications and Procedures	C, O
CEGS-16224	Test Reports	
CEGS-16224	Compressor and Turbine	SD, M
CEGS-16224	Turbine Components and Auxiliaries	SD, M
CEGS-16224	Speed Reducing Gear and Acc. Drive Gear	SD, M
CEGS-16224	Generator and Exciter	SD, M
CEGS-16224	Control System and Related Equipment	SD, M
CEGS-16224	Miscellaneous Electrical and Instrument Items	SD, M
CEGS-16224	Structures, Services and Factory Painting	SD, M
CEGS-16224	Fuel Oil Bulk Storage Tanks	SD, M
CEGS-16224	Factory Tests	C, T
CEGS-16224	Power and Control Cable (600 V - 5 KV)	M
CEGS-16224	Power Cable (5 - 15 KV)	M
CEGS-16224	Cable Terminations (5 - 15 KV)	M
CEGS-16224	Field Testing and Inspection	T
CEGS-16224	Performance Tests	T

CEGS-16225	Experience	M
CEGS-16225	Welding Qualifications	C
CEGS-16225	Performance Test Reports	T
CEGS-16225	Steam Turbine	SD, M
CEGS-16225	Speed Reducing Gear	SD, M
CEGS-16225	Generator and Exciter	SD, M
CEGS-16225	Factory Tests	T, C
CEGS-16225	Power and Control Cable (600 V - 5 KV)	M
CEGS-16225	Power Cable (5 - 15 KV)	M
CEGS-16225	Cable Terminations (5 - 15 KV)	M
CEGS-16225	Field Testing and Inspection	T
CEGS-16225	Performance Tests	T
CEGS-16262	Certified Laboratory Test Reports	C, T
CEGS-16262	Factory Tests and Reports	T
CEGS-16262	Automatic Transfer Switches	M
CEGS-16263	Welding Qualifications	C
CEGS-16263	Experience	O
CEGS-16263	Certificates of Compliance	C
CEGS-16263	Certificate of Fuel Consumption	C
CEGS-16263	Shop Drawings	SD
CEGS-16263	Performance Test Reports	T
CEGS-16263	Batteries	M
CEGS-16263	Battery Chargers	M
CEGS-16263	Circuit Breakers	M
CEGS-16263	Generator and Exciter	M
CEGS-16263	Switchgear	SD, M
CEGS-16263	Tanks	SD, M
CEGS-16263	Engine	M
CEGS-16263	Fuel System	SD, M
CEGS-16263	Centrifuge	M
CEGS-16263	Cooling System	SD, M
CEGS-16263	Engine-cooling with Heat-recovery Equipment	SD, M
CEGS-16263	Exhaust-gas Boiler	SD, M
CEGS-16263	Exhaust Mufflers	M
CEGS-16263	Starting System	M
CEGS-16263	Instrumentation	SD, M
CEGS-16263	Safety Circuit	SD, M
CEGS-16263	Generator	M
CEGS-16263	Exciter	M
CEGS-16263	Voltage Regulator	M
CEGS-16263	Generator Switchboard	SD, M
CEGS-16263	Switchgear	SD, M
CEGS-16263	Switchgear	SD, M
CEGS-16263	Automatic Operation.	SD, M
CEGS-16263	Station Battery System	M
CEGS-16263	Automatic High-low Battery Charging	M
CEGS-16263	Inspection and Tests	C, T
CEGS-16263	EM Compatibility	C, T

CEGS-16264	Operating Experience	C, M
CEGS-16264	Certificate of Compliance	C
CEGS-16264	Shop Drawings	SD
CEGS-16264	Manufacturer Certification	C
CEGS-16264	Batteries	M
CEGS-16264	Circuit Breakers	M
CEGS-16264	Exciter	M
CEGS-16264	Generator	M
CEGS-16264	Engine	M
CEGS-16264	Engine Cooling System	SD, M
CEGS-16264	Air Intake System	M
CEGS-16264	Exhaust System	M
CEGS-16264	Emissions	C
CEGS-16264	Starting System	M
CEGS-16264	Storage Battery	M
CEGS-16264	Pneumatic Testing	T
CEGS-16264	Safety System	SD, M
CEGS-16264	Governor	M
CEGS-16264	Engine Instrumentation	SD, M
CEGS-16264	Generator	M
CEGS-16264	Exciter	M
CEGS-16264	Voltage Regulator	M
CEGS-16264	Generator Control Panel	SD, M
CEGS-16264	Factory Certification	C, T
CEGS-16264	Factory Inspection and Tests	T
CEGS-16264	On-site Tests	T
CEGS-16264	Test Data	C, T, O
CEGS-16311	Factory Tests	T
CEGS-16311	Power System Protection	O
CEGS-16311	Coordination Study	
CEGS-16311	Proof of Compliance	M, C
CEGS-16311	Certificate of Satisfactory Use	C
CEGS-16311	Certificate of Non-PCBC Filled Transformer	
CEGS-16311	Shop Drawings	SD
CEGS-16311	Factory Test Reports	T
CEGS-16311	Field Test Reports	T
CEGS-16311	Annunciators	SD, M
CEGS-16311	Circuit Breakers	M
CEGS-16311	Insulators	M
CEGS-16311	Luminaires	M
CEGS-16311	Meters (Time Integrating)	M
CEGS-16311	Power Fuse Disconnect Units	M
CEGS-16311	Substation Equipment Items	M
CEGS-16311	Step-Voltage Regulators	SD, M
CEGS-16311	Surge Arrestors	M
CEGS-16311	Switches	M
CEGS-16311	Metal-clad Switchgear	SD, M
CEGS-16311	Metal-enclosed Interrupter Switchgear	SD, M
CEGS-16311	PCB Content Testing	T
CEGS-16311	Articulated Primary Unit Substation	SD, M
CEGS-16311	Primary Unit Substation	SD, M

CEGS-16311	Incoming Lines and Aerial Bases	M
CEGS-16311	Suspension Insulators	M
CEGS-16311	Incoming Line Switches	M
CEGS-16311	Metal-enclosed Interrupter Switchgear	SD, M
CEGS-16311	Oil Circuit Breaker	M
CEGS-16311	Power Transformer	SD, M
CEGS-16311	Primary Unit Substation	SD, M
CEGS-16311	Substation Transformer	SD, M
CEGS-16311	Articulated Primary Unit Substation	SD, M
CEGS-16311	Metal Enclosed Bus	SD, M
CEGS-16311	Metal-clad Switchgear	SD, M
CEGS-16311	Step-voltage Regulators Installation	SD, M
CEGS-16311	Battery Racks	SD, M
CEGS-16311	Luminaires	M
CEGS-16311	Annunciator System	SD, M

CEGS-16311	Ground Resistance Measurements	T
CEGS-16370	Nameplates (Non-PCBC Certification)	
CEGS-16370	Certified Factory Test	T, C
CEGS-16370	Certifications	C
CEGS-16370	Certified Field Test Reports	T, C
CEGS-16370	Certification of Qualifications of Medium-Voltage Cable Installers	C
CEGS-16370	Protective Coordination Study	O
CEGS-16370	Automatic Circuit Reclosers	M
CEGS-16370	Capacitors	M
CEGS-16370	Bare Conductors	M
CEGS-16370	Insulated Conductors	M
CEGS-16370	Connectors and Splices	M
CEGS-16370	Fused Cutouts, Primary	M
CEGS-16370	Steel Poles	M
CEGS-16370	Wood Poles	M
CEGS-16370	Surge Arrestors	M
CEGS-16370	Transformers	M
CEGS-16370	Splices and Connectors	M
CEGS-16370	Steel Poles	M
CEGS-16370	Insulators	M
CEGS-16370	Guy Assemblies	M
CEGS-16370	Fuse Cutouts and Fuses	M
CEGS-16370	Surge Arrestors	M
CEGS-16370	Overhead Distribution Transformers	M
CEGS-16370	Group-operated Load Interrupter Switches	M
CEGS-16370	Capacitor Equipment	M
CEGS-16370	Automatic Circuit Reclosers	M
CEGS-16370	Lighting	M
CEGS-16370	Ground Resistance Measurements	T
CEGS-16370	Medium-voltage Preassembled Cable Test	
CEGS-16375	Nameplates (Non-tetrachloroethylene/non-PCB Certification)	C
CEGS-16375	Proof of Compliance	C
CEGS-16375	Shop Drawings	SD, M
CEGS-16375	Certificates of Compliance (Manufacturer)	C
CEGS-16375	Certified Factory Test Reports	C, T
CEGS-16375	Contractor's Data	C, T
CEGS-16375	Certificates	C
CEGS-16375	Certified Field Test Reports	C, T
CEGS-16375	Certification of the Qualifications of Medium-voltage Installers	C
CEGS-16375	Protective Coordination Study	O
CEGS-16375	Busways	SD, M
CEGS-16375	Cables	M

CEGS-16375	Medium-voltage Cable Terminations	M
CEGS-16375	Separable Medium-voltage Connectors	M
CEGS-16375	Luminaire Components, Roadway Lighting	M
CEGS-16375	Poles	SD, M
CEGS-16375	Panelboards	M
CEGS-16375	Switchgear, Metal-enclosed Interrupter Type	SD, M
CEGS-16375	Surge Arrestors	M
CEGS-16375	Transformers	M
CEGS-16375	Cable, Stations General Requirements	SD, M
CEGS-16375	Medium-voltage Cables	SD, M
CEGS-16375	Cable Joints	M
CEGS-16375	Terminations	M
CEGS-16375	Low-voltage Cables	M
CEGS-16375	Manholes	SD, M
CEGS-16375	Hardware	M
CEGS-16375	Transformer Station	SD, M
CEGS-16375	Surge Protection	M
CEGS-16375	Busways	SD, M
CEGS-16375	Lighting	M
CEGS-16375	Poles	SD, M
CEGS-16375	Ground-resistance Measurements	C, T
CEGS-16375	Medium-voltage Cable Test	T
CEGS-16415	Busway	SD, M
CEGS-16415	Battery Chargers, Cable Trays	M
CEGS-16415	Circuit Breakers	M
CEGS-16415	Device Plates	M
CEGS-16415	Fixtures	M
CEGS-16415	Motor Controls and Motor Control Centers	SD, M
CEGS-16415	Outlets	M
CEGS-16415	Panelboards	SD, M
CEGS-16415	Receptacles	M
CEGS-16415	Switchboard, Dead-Front Distribution	M
CEGS-16415	Switchgear Assemblies, Power	SD, M
CEGS-16415	Switches	M
CEGS-16415	Transformers	M
CEGS-16415	Isolated Power Systems	M
CEGS-16415	Ground Rods	T
CEGS-16415	Wiring Methods, Cable Trays	SD, M
CEGS-16415	Busway Systems	SD, M
CEGS-16415	Floor Outlets	M
CEGS-16415	Device Plates	M
CEGS-16415	Receptacles	M
CEGS-16415	Wall Switches	M
CEGS-16415	Circuit Breakers	
CEGS-16415	Service Equipment	SD, M
CEGS-16415	Panelboards and Load Centers	SD, M
CEGS-16415	Power Switchgear Assemblies	SD, M
CEGS-16415	Circuit Breakers	M
CEGS-16415	Metal Oxide Varistors	M

CEGS-16415	Motor Control	SD, M
CEGS-16415	Motor Control Centers	SD, M
CEGS-16415	Transformers	M
CEGS-16415	Lamps and Lighting Fixtures	M
CEGS-16415	X-ray Film Illuminators	M
CEGS-16415	Stage Footlights	M
CEGS-16415	Emergency Light Sets	M
CEGS-16415	Battery Chargers	M
CEGS-16415	Tests	T
CEGS-16505	Cable	M
CEGS-16505	Connections	M
CEGS-16505	Poles	M
CEGS-16505	Cable	M
CEGS-16505	Poles	M
CEGS-16505	Lighting	M
CEGS-16505	Fused-in-line Connections	M
CEGS-16505	Transformers	M
CEGS-16505	Lighting Control System	M
CEGS-16505	Grounding	T
CEGS-16505	Ground Resistance Measurements	T
CEGS-16610	Shop Drawings	SD
CEGS-16610	Performance Test Reports	T
CEGS-16610	Materials and Equipment	M
CEGS-16610	Tests and Measurements	T, O
CEGS-16640	Shop Drawings	SD
CEGS-16640	Qualifications	T, O
CEGS-16640	Anodes	M
CEGS-16640	Miscellaneous Materials	M
CEGS-16640	Tests and Measurements	T, O
CEGS-16641	Shop Drawings	SD
CEGS-16641	Test Reports	T, O
CEGS-16641	Impressed Current Anodes	M
CEGS-16641	Rectifiers and Associated Equipment	M
CEGS-16641	Miscellaneous Materials	M
CEGS-16641	Testing, Adjusting, and Placing in Service	T, O
CEGS-16642	Shop Drawings	SD
CEGS-16642	Test Reports	T, O
CEGS-16642	Impressed Current Anodes	M
CEGS-16642	Rectifiers and Associated Equipment	M
CEGS-16642	Coke Breeze	M
CEGS-16642	Miscellaneous Materials	M
CEGS-16642	Tests and Measurements	T, O
CEGS-16665	Shop Drawings	SD
CEGS-16665	Test Reports	T, C
CEGS-16670	Shop Drawings	SD
CEGS-16670	Certificates of Compliance	C
CEGS-16670	Materials	M
CEGS-16710	Tests	T
CEGS-16721	Shop Drawings	SD
CEGS-16721	Installation Certificate	C
CEGS-16721	Spare Parts Data	O
CEGS-16721	Calculations	O

CEGS-16721	Instructions	O
CEGS-16721	Performance Test Reports	T
CEGS-16721	Operation	M
CEGS-16721	Overvoltage and Surge Protection	M
CEGS-16721	Control Panel	M
CEGS-16721	Manual Fire Alarm Stations	M
CEGS-16721	Fire Detecting Devices	M
CEGS-16721	Annunciator Equipment	M
CEGS-16721	Peripheral Equipment	M
CEGS-16722	Shop Drawings	SD
CEGS-16722	Listings and Approvals	C
CEGS-16722	Data	O
CEGS-16722	Instructions	O
CEGS-16722	Calculations	O
CEGS-16722	Performance Test Reports	T
CEGS-16722	Fire Alarm Transmitter	M
CEGS-16722	Transmitter Interface Device	M
CEGS-16722	Fire Alarm Monitoring Base Station	M
CEGS-16722	Peripheral Equipment	M
CEGS-16722	Overvoltage and Surge Protection	M
CEGS-16722	Test	T
CEGS-16741	Proof of Compliance	C
CEGS-16741	Shop Drawings	SD, O
CEGS-16741	System Calculations	O
CEGS-16741	Test Plans	O
CEGS-16741	Test Reports	T
CEGS-16741	Manufacturer's Certificate	C
CEGS-16741	Manufacturer's Recommendations	O
CEGS-16741	Hardware	M
CEGS-16741	Digital Interface	M
CEGS-16741	Connector Blocks	M
CEGS-16741	Terminal Blocks	M
CEGS-16741	Standby Battery	M
CEGS-16741	Cables	M
CEGS-16741	Instruments	M
CEGS-16741	Transmitter	M
CEGS-16741	Receiver	M
CEGS-16742	Shop Drawings	SD, O
CEGS-16742	Test Plans	O
CEGS-16742	Test Reports	T
CEGS-16742	Cable	M
CEGS-16760	Shop Drawings	SD, O
CEGS-16760	Inspection and Test Reports	T
CEGS-16760	Intercom System Products	M
CEGS-16760	Inspection and Testing Reports	T
CEGS-16750	Shop Drawings	SD
CEGS-16750	Performance Test Reports	T
CEGS-16755	Shop Drawings	SD
CEGS-16755	Performance Test Reports	T
CEGS-16755	Materials and Equipment	M
CEGS-16755	Performance Test Reports	T
CEGS-16766	Shop Drawings	SD

CEGS-16766	Performance Test Reports	T
CEGS-16767	Shop Drawings	SD, O
CEGS-16767	Performance Test Reports	T
CEGS-16767	Equipment and Components	M
CEGS-16767	Performance Test Reports	T
CEGS-16770	Shop Drawings	SD
CEGS-16770	Performance Test Reports	T
CEGS-16770	Materials and Equipment	M
CEGS-16770	Performance Test Reports	T
CEGS-16781	Shop Drawings	SD
CEGS-16781	Performance Test Reports	T
CEGS-16781	Headend Equipment	M
CEGS-16781	Cable Distribution Equipment	M
CEGS-16781	Performance Test Reports	T
CEGS-16790	Technical Data	O
CEGS-16790	Calculations	O
CEGS-16790	Manufacturer's Certifications	C
CEGS-16790	Performance Verification and Endurance Testing Data	T, O
CEGS-16790	Operation and Maintenance Data	O
CEGS-16790	Training Data	O
CEGS-16790	Surge Protection	M
CEGS-16790	Status Display and Control Panel	M
CEGS-16792	FCC Certifications	C
CEGS-16792	Wire Line Test Reports	T
CEGS-16792	Contractor's Field Test Reports	T
CEGS-16792	Manuals	O
CEGS-16792	Functional Design Manual	O
CEGS-16792	Hardware Manual	O
CEGS-16792	Manufacturer's Repair Parts List	O
CEGS-16792	Operation Manual	O
CEGS-16792	Maintenance Manual	O
CEGS-16794	FCC Certifications	C
CEGS-16794	Field Test Reports	T
CEGS-16794	Manuals	O
CEGS-16794	Functional Design Manual	O
CEGS-16794	Hardware Manual	O
CEGS-16794	Manufacturer's Repair Parts List	O
CEGS-16794	Operation Manual	O
CEGS-16794	Maintenance Manual	O
CEGS-16795	FCC Certifications	C
CEGS-16795	Field Test Reports	T
CEGS-16795	Manuals	O
CEGS-16795	Functional Design Manual	O
CEGS-16795	Hardware Manual	O
CEGS-16795	Manufacturer's Repair Parts List	O
CEGS-16795	Operation Manual	O
CEGS-16795	Maintenance Manual	O
CEGS-16797	FCC Certifications	C
CEGS-16797	Test Report	T
CEGS-16797	Contractor's Field Test Report	T
CEGS-16797	Manuals	O

CEGS-16797	Functional Design Manual	O
CEGS-16797	Hardware Manual	O
CEGS-16797	Manufacturer's Repair Parts List	O
CEGS-16797	Operation Manual	O
CEGS-16797	Maintenance Manual	
CEGS-16798	FCC Certifications	C
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CEGS-16798	Contractor's Field Test Report	T
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Spec. No.

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01430	Environment Protection
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	Division 2 - Site Work
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02110	Clearing and Grubbing
02232	Select Material Subbase Course
02241	Aggtregate Base Course
	Division 3 - Concrete
03300	Concrete for Building Construction
	Division 4 - Masonry
04200	Masonry
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05055	Miscellaneous Metal
05120	Structural Steel
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06100	Rough Carpentry
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07112	Bituminous Waterproofing
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09250	Gypsum Wallboard
09510	Acoustical Ceilings
09650	Resilient Flooring
09900	Painting, General

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10160	Toilet Partitions
10270	Raised Floor Systems
10430	Exterior Signage
10800	Accessories

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Division 12 - Furnishings

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CEMP-ES

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314-1000

ER 1110-345-720

Regulation
No. 1110-345-720

31 October 1989

Engineering and Design
CONSTRUCTION SPECIFICATIONS

1. Purpose. This regulation prescribes policy and procedures for the preparation of the technical provisions of construction specifications for military construction.

2. Applicability. This regulation is applicable to all HQUSACE/OCE elements and all field operating activities (FOA) having military construction design responsibility.

3. References.

- a. Federal Acquisition Regulation (FAR), Subpart 10
- b. AR 415-11
- c. AR 415-15
- d. ER 415-1-10
- e. ER 415-1-11
- f. ER 715-1-10
- g. ER 1110-345-100
- h. ER 1110-345-710
- i. ER 1180-1-6
- j. EP 310-1-5
- k. AFR 88-15

4. Types of Specifications.

a. Outline Specifications. Outline specifications provide an outline form of construction requirements, and are used to help describe the design of structures and related facilities. They are used to supplement sketches, planning drawings, budgetary drawings, concept drawings, and/or design data.

This regulation supersedes ER 1110-345-720, 17 January 1977.

ER 1110-345-720
31 Oct 89

b. Guide Specifications. The HQUSACE guide specification system consists of a series of guide specifications directed toward various applications of military construction projects. Engineer Pamphlet, EP 310-1-5, is issued semiannually by HQUSACE to provide a current list of published guide specifications. The HQUSACE guide specifications define

requirements for work features that occur in the construction of facilities on a repetitive basis. Guide specifications are prepared by or for HQUSACE and are distributed through normal publication channels. Guide specifications establish the form to be used for the technical provisions of construction specifications and, as far as practicable, the specific requirements to be included. Guide specifications reflect a standard of quality that will provide construction with a maximum of overall economy consistent with functional, aesthetic, and environmental requirements, energy conservation measures and sound architectural and engineering practices. The guide specifications are intended to promote uniformity of construction throughout the Corps and to provide a broad and open competition in procurement (FAR Subpart 10.002). The guide specifications have been coordinated with the commercial community and are revised and reissued periodically, as required to maintain state-of-the-art technology for military construction. The guide specifications also serve as convenient work sheets to be edited or tailored by specification writers preparing project specifications. Certain requirements in the guide specifications have general applicability to all projects, while other requirements that must vary from project to project have blanks to be filled in; optional words, phrases, or paragraphs to be chosen or deleted; or special paragraphs to be added.

c. Standard Specifications. HQUSACE standard specifications are construction requirements, based on Corps of Engineers guide specifications, for a facility design that is part of a set of drawings and specifications intended for site adaptation at several locations. Standard specifications often include alternate assemblies or systems which are to be used as applicable to the geographical zones where the facility will be built. Standard specifications are prepared by or for HQUSACE, are updated periodically by the issuing offices, and are available with the standard drawings to which they apply (see AR 415-15 and ER 1110-345-710).

d. Project Specifications. Project (or construction) specifications are construction requirements which apply to a specific facility at a specific location. Construction specifications will be based on HQUSACE guide specifications which have been edited to suit the specific requirements of the project to the extent such guide specifications exist.

5. Preparation of Outline Specifications. Outline specifications used for the budgetary phase will consist of a concise but clear-cut identification of applicable criteria, including guide specifications to be used. This may be done by reference, with notation of any exceptions thereto. Outline specifications for the concept design phase will

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31 Oct 89

identify the salient features of construction, and will include a list of the sections proposed for the technical provisions, and a finish schedule for typical rooms.

6. Preparation of Project Specifications.

a. General Requirements. Project specifications are developed by or for the Corps office responsible for the project, using HQUSACE guide specifications and standard specifications to the extent possible. Use of HQUSACE guide specifications in the preparation of project specifications is mandatory to the extent the guide specifications are applicable. The technical provisions will, when used with the contract drawings, provide a complete and comprehensive construction contract

which can be bid on a fair and competitive basis and completely executed without change, except as necessary to deal with unforeseen conditions or to accomplish changes made during construction (see ER 1180-1-6 and ER 415-1-11 for guidance on biddability, constructibility, and operability reviews). Where a previous project design is adapted for use on a similar project, or where a project design has been completed but release to prospective bidders has been held in abeyance for a period of time exceeding six months, the specifications will be reviewed and revised as necessary to conform to the latest applicable HQUSACE guide specifications and the policy for their use. Where the project design is based on standard specifications, the standard specifications will be updated as required to reflect the requirements of current guide specifications.

b. Specifications Prepared by Architect-Engineers. The division or district office will assist architect-engineer firms under contract to them in the selection of pertinent guide specifications and will provide copies of regulations, manuals, engineer technical letters, guide specifications, and other information as required (see ER 715-1-10). Previous project specifications or standard specifications for similar structures will be furnished only as samples of the form and content for completed work, except that they may be used as guides for sections for which applicable guides have not been issued, if the provisions therein are clearly applicable to the project and are in accord with current instructions.

7. Specification Format. Format of guide specifications is established through cooperative efforts of the military services and other Federal agencies and is based on construction industry recommendations promulgated by the Construction Specifications Institute (CSI). Project specifications will have the same format and the same section numbers as the HQUSACE guide specifications upon which they are based, or if no guide specification exists, they will be in the same format and the same writing style as the HQUSACE guide specifications and be numbered in conformance with the CSI MASTERFORMAT.

8. Submittals of Technical Data and Samples. Submittals of shop drawings, test reports, certificates, and samples will not be required for noncritical items of relatively low value as compared to the cost of making the submittal; that is, a submittal will not be required when the cost will exceed the benefit to the project (see ER 415-1-10 for contractor submittal requirement). Avoidance of such submittal requirements is particularly encouraged for small projects. However, where guide specifications contain detailed technical submittal requirements necessary to insure performance, such provisions will be retained in the contract provisions.

9. Testing. Except where testing must be performed by the Government to ensure suitability, testing will be made the responsibility of the contractor under the Contractor Quality Control provisions (see ER 1180-1-6 for construction quality management). However, in preparing detailed specifications making testing the contractor's responsibility, the contract requirements will be written in such a way as not to abrogate the prerogative of the contracting officer to perform confirmation testing and quality assurance testing, when deemed advisable or to witness the testing by the contractor. Testing will be kept to a minimum and consistent with assuring quality of critical construction and cost control. However, under no circumstances should the cost of a test or the cost of the item being tested be considered as the sole criterion for determining the value of the test. Occasionally, the success or failure of a major portion of a project may be critically influenced by some small item; therefore, the overall benefit to the project should be used

as the basis for determining the value of the test.

10. New Materials and Methods. New or untried materials or methods of construction will be specified only when their merits have been established and the materials or methods have been determined to fully meet criteria for the project. A handout is available for providing information on evaluation of new materials, equipment, and methods for construction; the evaluation handout may be given to producers and suppliers who present their products for inclusion in the HQUSACE guide specifications. Copies of the evaluation handout (Appendix A) may be obtained from HQUSACE (CEMP-ES).

11. Trade Names and Proprietary Items. As a general policy, the use of trade names, proprietary items, and the drafting of a specification based on a manufacturers's description of a particular commercial article will be avoided (see ER 1110-345-100 and FAR, Subpart 10.004). When it is necessary to specify materials or equipment other than by reference to a standard generally known to and used by the industry, minimum requirements will be stated in one of the following ways: either specify in terms of physical characteristics, chemical composition, laboratory test results, performance in actual use, or any combination of these as applicable, in such manner as to ensure full and free competition; or specify by use of trade names qualified by specific identification such as manufacturers' model numbers or catalog numbers, and further qualified with words "or approved equal". However, experience indicates that a "trade name or approved equal" description is appropriate only as a last resort and should be used with great care and discretion; therefore, the project file will be documented to explain the necessity for using this approach in each instance it is used. Further, where the "trade name or approved equal" approach is used, the contract provisions will include those salient features of the item or items specified upon which equality will be determined.

12. Contractors' Options. Optional materials and methods of construction that are of a type and quality acceptable for military construction are included in applicable guide specifications and standard designs, as a means of increasing competition and reducing project costs. The optional materials listed in guide specifications are all part of the criteria for military construction, and contract specifications will include all optional products and materials contained in applicable guide or standard technical specifications. Additional options may be considered if a study of conditions affecting the project shows that it is in consonance with good engineering practice in that locality, is economically justifiable, and is in the best interest of the Government. Where such justification can be shown, the division commander may authorize additional options for specific projects. Where cumulative experience indicates that a change in standard options may be advisable, division commanders will forward their recommendations to HQUSACE (CEMP-ES) using ENG Form 3078, Recommended Changes to Engineering Documents.

13. Guarantees. Requirements for guarantees, beyond the normal one year warranty of construction period, will be specified only for materials, equipment or systems for which such longer guarantees are normally provided in the industry. Even then, the increased cost for the guarantee and the costs of administering and enforcing the guarantee must be evaluated, prior to specifying such guarantees.

14. Referenced Publications. Materials and equipment will be described, where possible, by reference to industry and Government standards, generally known to the industry, and by citing the type, class or other designation necessary to identify the product required. Reference standards will not be used to describe minor, noncritical items (such as

incidental fasteners) when any commercially available product of that nature would be adequate. To the maximum extent practicable, such reference will be to nationally recognized industry and technical society specifications and standards. If industry documents are unavailable or unsuitable, applicable Federal and military specifications and standards will be referenced, provided the materials are required to be of the quality described in those publications. References will be addressed to specific issues in all cases; where the designation does not include a revision letter or other specific identification, the date will be included. Interim Federal documents and limited-coordination military documents will not be referenced in place of approved documents, unless issued by an Army agency or DoD or unless such use has been authorized in a HQUSACE guide specification, notice or letter. Where it is necessary to modify the requirements of a Federal or military document, by citing exceptions in the contract specifications and such modifications are repetitive, a request for a change in the referenced publication will be forwarded to HQUSACE (CEMP-ES). Publications not readily available to bidders, such as engineer regulations (ER), engineer technical letters (ETL), and technical manuals (TM), should not be referenced.

15. Deviations of HQUSACE Guide Specifications. It is recognized that the requirements in the guide specifications will not suit every project, and that the guide specifications must be tailored to fit the specific project requirements. Each guide specification contains notes providing guidance on use of the specification and the coordinations required with the other specification sections included in the project and with the project drawings. Great care must be taken to preserve the intent of the guide specifications. Since the HQUSACE guide specifications are coordinated with industry during their development, the specifications, therefore, represent an agreement with the commercial community regarding the level of performance that the Corps of Engineers will require on their construction projects. For that reason, it is important to retain the wording of the specifications to the extent practicable, since casual changes could negate past coordinations and benefits of past experience or may prove costly or embarrassing to the Corps. Where designer choices are provided in the guide specifications, great care must be exercised in making the proper choices for the project. Alteration of guide specifications to provide wording more suitable to the personal preference of the specification writer for a project is not authorized. Tailoring of a HQUSACE guide specification, either by a deletion or by an addition, is considered to be a deviation; therefore, the guidelines for deviations, as set forth below, will be applicable.

a. HQUSACE-Authorized Deviations. The following deviations are authorized without reporting to HQUSACE:

(1) Changes required or permitted by Department of the Army publications, HQUSACE publications, HQUSACE design directives or letters, or the "notes" section of the guide specifications.

(2) Deletion of inapplicable text material.

(3) Insertion of additional text material which is necessary in order to properly specify the project involved.

(4) For Air Force projects only, editing to comply with AR 415-11, the requirements of AFR 88-15 and other authorized criteria documents such as Air Force ETLs. For other non-Army projects, editing to comply with requirements of the non-Army agency.

(5) Changes to reduce requirements for tests and submittals to minimum consistent with the scope, cost and importance of the work to be

performed.

(6) Changes to make testing the contractor's responsibility to the extent consistent with good practice.

b. Deviations Reviewed and Approved by Division Commanders. Except for HQUSACE-authorized deviations, changes will not be made to the HQUSACE guide specifications, unless appropriate to fit the specific project involved, and then only with the approval of the division commander. Consideration may be given to reasonable and practical deviations from established design criteria, including DoD criteria, when deemed appropriate for the specific project involved and approved by the division commander. Division commander review, prior to approval, will ensure that the deviation reflects sound engineering logic and complies with current regulations and procurement policies (see paragraph 4 of ER 1110-345-100 for limitations on deviation authority where safety, airfield and heliports, or diesel-engine generators are involved). Reporting to HQUSACE, in accordance with ER 1110-345-100, paragraph 4, will be required. Districts will take the necessary action to insure that any proposed deviation from criteria is specifically brought to the attention of the division commander at the earliest knowledgeable design phase, preferably at the time of submittal for review of concept design.

16. Modified Versions of HQUSACE Guide Specifications. In overseas areas, modified versions of HQUSACE guide specifications may be necessary to fit local construction practices; consequently, preparation of such modified versions for repetitive use in overseas areas is authorized. In the United States, the preparation of modified versions of the HQUSACE guide specifications for repetitive use is expressly prohibited. However, this prohibition does not preclude preparation of special sections covering subjects for which no guide specifications exist. Any specification which is not exactly as issued by HQUSACE may not be called a Corps of Engineers guide specification (CEGS). Changing any part of a CEGS and reproducing the changes documents with a designation of CEGS is strictly prohibited, as is the development of a local guide specification and using "CEGS" as part of the document identification. When considered necessary, local specifications covering items not included in the HQUSACE guide specifications may be developed for local use, in which event a copy of such specifications will be furnished to HQUSACE (CEMP-ES) for information and possible adoption as a CEGS.

17. Separate Notes for Local Requirements. When considered necessary, CEGS may be supplemented with instructions or notes pertaining to local usage of the guide specifications necessary for accomplishment of projects in their area. Separate notes issued for use as supplement to the CEGS must be approved by the division commander and submitted to HQUSACE (CEMP-ES) for information.

18. Notices to Guide Specifications. Changes to CEGS-series guide specifications in the form of Notices are published, when necessary to make technical changes and update publication references in the guide specifications. A specific publication issue referenced in project specifications need be no later than in the current Notice for the applicable guide specifications, and date of the reference need not be included where the specific issue is otherwise identified. After initial distribution, local reproduction by office copying machine is authorized when needed.

19. Use of Automated Methods. The SPECSINTACT automated system for the preparation of project specifications has been adopted by the Corps of Engineers and various other military and civil Federal agencies as the means for producing and maintaining their guide specifications systems and to provide the state-of-the-art specification automation to users.

Also, the agencies involved make their individual guide specifications data bases available to each other through compact disk and magnetic media services. This cooperative effort is intended to provide greater uniformity and better transportability of guide specifications, to provide a more economical means of producing project specifications, and to make it easier to use guide specifications of other agencies, when a corresponding guide specification does not exist in an agency system. The HQUSACE guide specifications have been converted to be fully compatible with SPECSINTACT, and FOA are encouraged to start using the system immediately. It is expected that within approximately two years all Corps project specifications will be produced through the system. SPECSINTACT includes a wide range of automated functions, and these functions are continually being refined and expanded to better serve the user.

20. Recommended Changes. HQUSACE welcomes proposals for technical or editorial change that are necessary or desirable either for general application or to adequately reflect local availability of materials and local construction practice. Such proposals will be addressed to HQUSACE (CEMP-ES) by submitting ENG Form 3078 in accordance with ER 1110-345-100.

FOR THE COMMANDER:

<SIGNED>

1 Appendix
App A-Evaluation Handout

ALBERT J. GENETTI, JR.
Colonel, Corps of Engineers
Chief of Staff

EVALUATION HANDOUT

CRITERIA AND FORMAT FOR
SUBMISSION AND EVALUATION OF MATERIALS,
EQUIPMENT, AND METHODS
FOR
INCLUSION IN GUIDE SPECIFICATIONS
USED FOR MILITARY CONSTRUCTION

1. General. Of the many construction materials, equipment and methods being developed, some may be employed profitably in the military construction program. It is the policy of the military department to specify for military construction those materials, equipment and methods that will provide construction with a maximum of over-all economy consistent with functional, aesthetic, and environmental requirements, energy conservation measures and sound architectural and engineering practice. Materials, equipment and methods will be utilized that will result in low cost, with due consideration to economical maintenance for the required use and life expected of the facility. Where possible, materials, equipment and methods specified will be those used in the civilian construction industry that have met this objective.

2. Guide Specifications. Guide specifications issued by the military department specify the materials, equipment and methods considered adequate to meet military construction requirements. The procedure outlined below establishes the criteria for selecting new and/or improved materials, equipment and methods for military construction. Representatives of industry in proposing new items for consideration for inclusion in the guide specifications for military construction will be required to adhere to the criteria.

3. Prerequisites for Consideration of New Materials. Equipment and Methods.

a. A new product or method proposed by a manufacturer for inclusion in the guide specifications must meet the following prerequisites:

(1) The items must equal or exceed the minimum standard for quality and/or performance currently included in the guide specifications.

(2) The in-place cost of the item must be such that it can compete with other acceptable products; or, the premium cost of the item must be justified in valid, demonstrable terms of long-range savings in cost or maintenance or operations.

(3) The item must be readily available in quantity and in wide geographical areas.

(4) The merits of the item must be substantiated by results of certified tests by an approved laboratory or by evidence of satisfactory use under conditions similar to the application being proposed for military construction.

(5) Manufacturing processes and installation techniques must be such as to insure satisfactory quality control without excessive inspection costs to the Government.

(6) A proposed product must lead itself to the preparation of a specification that will be adequate to insure required results and yet be nonrestrictive enough to admit other available and equally acceptable products.

b. Certain products are so limited in availability or usage that they have application only in localized areas. If such products meet the other prerequisites listed above, they may be considered by military departments field offices for use on specific projects subject to the approval of the military department headquarters.

4. Submission of and Use of Data Proposed. Requests for the inclusion of new products in the guide specifications should be directed to the headquarters office of each individual military department that the manufacturer has an interest in having his product used (see attached list for proper addresses). It is not necessary to make inquiry at a higher level, through Congressional channels. All requests shall be accompanied by an orderly presentation of data conforming to the attached format, or as CSI Specification Data Sheets with supplemental data of a non-proprietary nature required by the attached, at the manufacturer's option. If the product is not favorably considered, the manufacturer will be so informed with the reasons therefore. If it is decided to include the product in the future, or revised the guide specifications, and the product is not described by an adequate nonrestrictive specification, it shall be the responsibility of the manufacturer to prepare such specification data. Inclusion in the guide specifications may not be used as a basis for advertising claims or similar publicity. It is emphasized that favorable consideration of a product with respect to the military guide specifications does not constitute approval of the product for any given construction project. In the case of each project, the express provisions of the contract documents govern, and strict adherence to the contract specifications is required after opening of bids.

5. Modification of Existing Specifications. Manufacturers have a definite responsibility to keep the military departments' construction agencies fully informed of any changes in design and manufacturer of construction components already included in the guide specifications. Request for consideration of each change shall be made in the manner outlined above.

1. PRODUCT NAME.

Give both proprietary and non-proprietary generic name.

2. MANUFACTURER.

Give name and address of manufacturer and name and telephone number of Washington, D.C. technical representative. Where no local representative is available, give name, address and telephone number of person to be contacted for technical discussions.

3. PRODUCT DESCRIPTION.

This should include succinct but accurate statements outlining a product where applicable:

- a. Basic use
- b. Limitations
- c. Composition

- d. Components
- e. Sizes and shapes
- f. Accessories
- g. Finishes
- h. Colors
- i. Reference standards applicable (i.e., ASTM, ANSI, etc.)

4. TECHNICAL DATA.

Give physical and chemical data, test reports, etc.

5. INSTALLATION.

Give brief description of installation techniques required to be followed.

6. AVAILABILITY AND COST.

Indicate material and labor cost to enable determination if the material, etc., is applicable to construction from an economic standpoint.

7. GUARANTEES AND WARRANTIES

Indicate what the manufacturer's standard guaranty or warranty period is and what it covers.

8. MAINTENANCE.

Indicate the normal maintenance procedures and normal maintenance cycles.

9. COMPETITION WITH OTHER SIMILAR PRODUCTS.

Indicate what other products this item is competitive with.

10. LIST OF INSTALLATIONS.

Include a list of projects, preferably in the Washington, D.C., or Baltimore, MD area, where the material, product, or method has been used and in-place evaluation can be made.

MILITARY DEPARTMENT HEADQUARTERS OFFICES

ADDRESS:

TELEPHONE NO.:

Department of the Army
U. S. Army Corps of Engineers
ATTN: CEMP-ES
20 Massachusetts Avenue, NW
Washington, D.C. 20314-1000

(202) 272-1185

Department of the Navy
Naval Facilities Engineering Command
ATTN: Code DS02
200 Stovall Street
Alexandria, VA 22042-2300

(703) 325-0450

Headquarters, U.S. Air Force
ATTN: HQUSAF-LEEDF
Bolling AFB
Washington, D.C. 20332-5000

(202) 767-4260

Spec. No.

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SECTION 01010

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5.	Additive Item No. A5, Sprinkling and Landscaping	01010-1

NOTE: Reminder portion of CQC paragraph is added to Section 01010

Spec. No.

SECTION 01010

DESCRIPTION OF ADDITIVE BID ITEMS

1. ADDITIVE ITEM NO. A1. PARKING AREA AND DRIVEWAY: Extent of work shall be as shown on drawings Sheet 6 (C-1) and 235 (E-40) and shall include 429 stall parking area with 3 connecting driveways to South Gate Drive and 11th Street, parking lot lighting system, and conduits and wiring originating from panel LK inside pedestrian underpass and miscellaneous demolition items.

2. ADDITIVE ITEM NO A2, PEDESTRIAN UNDERPASS: Extent of work shall be shown on drawing Sheet 9 (C-4), Sheet 12 (C-7), Sheet 18 (C-13), Sheet 227 (E-32) and Sheet 235 (E-40) and shall include the complete pedestrian underpass structure, lighting and drainage system, snow melting system, 8" drainage pipe to existing catch basin, panels, underground feeder from T6 to T7 and transformer 17.

3. ADDITIVE ITEM NO A3, INSULATION OF PRECAST CONCRETE WALLS: Provide under this item furring channels, fasteners, gypsum cover board, plywood wainscot and miscellaneous metal closures at top and bottom of insulation as shown on the drawings and as specified in SECTION: ROUGH CARPENTRY. This item shall also include exterior wall insulation between precast wall panels and 8" CMU inner walls. Provide paint as per SECTION:

PAINTING, GENERAL over exposed precast wall panels under the base bid. Painting work shall be deleted in lieu of painting gypsum board and plywood if this item is accepted.

4. ADDITIVE ITEM NO. A4, LP GAS STANDBY SYSTEM: Extent of work shall be as shown on Sheet 17 (C-12) and shall include the complete LP Gas Standby System, fencing, concrete saddles for LP storage tank, bulkhead, steam supply, condensate discharge, drywell and foundation slab for vaporizer. Natural gas piping system shall not be part of this item.

5. ADDITIVE ITEM NO. A5, SPRINKLING AND LANDSCAPING: Provide under Additive Sprinkling as shown on the drawings, Sheet 19 (C-14). Provide capped tees on the 6" water service line in the three branch line locations Sheet 19 (C-14). Provide under Additive Landscaping as shown on the drawings, Sheet 21 (C-16). Provide fill as the planting areas up to bottom level of topsoil under the base bid.

* * * * *

- REMINDER -

Located at the front of these specifications are the Contract Clauses, Special Clauses and Division I GENERAL REQUIREMENTS of the Technical Specifications, which apply to every aspect of this contract including the work in this section whether performed by Prime Contractor, subcontractor, or supplier.

Appendix J - EXAMPLE ONLY

Spec. No.

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Appendix J - EXAMPLE ONLY
SECTION 05120

STRUCTURAL STEEL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC 326 (Nov 1, 1978, with Commentary) Specification for the Design, Fabrication and Erection of Structural Steel for Buildings

AISC S302 (Feb 1987) Code of Standard Practice for Steel Buildings and Bridges

AISC S329 (Jul 1986) Specification for Structural Joints Using ASTM A 325 or ASTM A 490 Bolts

AMERICAN NATIONAL STANDARDS INSTITUTE, INC (ANSI)

ANSI B18.22.1 (1965; R 1981) Plain Washers

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 6 (1988c) Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use

ASTM A 36 (1988c) Structural Steel

ASTM A 53 (1988a) Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless

ASTM A 242 1988) High-Strength Low-Alloy Structural Steel

ASTM A 307 (1988a) Carbon Steel Bolts and Studs, 60,000 psi, Tensile Strength

ASTM A 325 (1988a) High-Strength Bolts for Structural Steel Joints

ASTM A 441 (1985) High-Strength Low-Alloy Structural Manganese Vanadium Steel

ASTM A 490 (1988a) Heat-Treated Steel Structural

	Bolts, 150 ksi Minimum Tensile Strength
ASTM A 500	(1984) Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM A 501	(1988) Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
ASTM A 502	(1983a; R 1988) Steel Structural Rivets
ASTM A 514	(1988) High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding
ASTM A 529	(1988) Structural Steel with 42 ksi (290 MPa) Minimum Yield Point (1/2 In. (13 mm) Maximum Thickness)
ASTM A 563	(1988a) Carbon and Alloy Steel Nuts
ASTM A 572	(1988c) High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality
ASTM A 588	(1988a) High-Strength Low-Alloy Structural Steel with 50 ksi (345 MPa) Minimum Yield Point to 4 In. (100 mm) Thick
ASTM A 618	(1988) Hot-Formed Welded and Seamless High-Strength Low-Alloy Structural Tubing

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B46.1	(1985) Surface Texture (Surface Roughness, Waviness and Lay)
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AMERICAN WELDING SOCIETY (AWS)

AWS D1.1	(1988) Structural Welding Code - Steel
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FEDERAL SPECIFICATIONS (FS)

FS TT-P-86	(Rev H) Paint, Red-Lead-Base, Ready-Mixed
FS TT-P-615	(Rev D; Am 3) Primer Coating: Basic Lead Silico Chromate, Ready Mixed
FS TT-P-645	(Rev A) Primer, Paint, Zinc-Chromate, Alkyd Type

1.3 GENERAL REQUIREMENTS

The AISC 326 shall govern the work. Welding shall be in accordance with AWS D1.1. High-strength bolting shall be in accordance with the

AISC S329.

1.4 SUBMITTALS

The following shall be submitted in accordance with Section 01300 SUBMITTALS:

SD-31, Detail Drawings

Detail drawings shall include all shop and erection details. Members and connections for any portion of the structure not shown on the contract drawings shall be detailed by the fabricator and indicated on the detail drawings. All welds shall be indicated by standard welding symbols of the AWS D1.1.

SD-50, Sample

If so requested, random samples of bolts, nuts, and washers as delivered to the job site shall be taken in the presence of the Contracting Officer and provided to the Contracting Officer for testing to establish compliance with specified requirements.

SD-62, Work Plan

Prior to erection, an erection plan of the structural steel framing is required. This erection plan shall conform to the requirements of the AISC S302. The erection plan shall describe all necessary temporary supports, including the sequence of installation and removal.

SD-76, Certificates of Compliance

Certified copies of mill test reports for structural steel, structural bolts, nuts, washers and other related structural steel items shall be provided. Certified copies of welders qualification test records showing qualification in accordance with AWS D1.1 shall be provided. A copy of the AISC certificate indicating that the fabrication plant meets the specified structural steelwork category shall be provided.

1.5 STORAGE

Material shall be stored out of contact with the ground in such manner and location as will minimize deterioration.

1.6 RESPONSIBILITY FOR ERRORS

The Contractor shall be responsible for all errors of detailing, fabricating, and for the correct fitting of the structural members.

PART 2 PRODUCTS

2.1 STRUCTURAL STEEL

2.1.1 Carbon Grade Steel

Carbon grade steel shall conform to ASTM A 36.

2.1.2 High-Strength Low-Alloy Steel

High-strength low-alloy steel shall conform to ASTM A 441.

2.1.3 Corrosion-Resistant High-Strength Low-Alloy Steel

Corrosion-resistant steel shall conform to ASTM A 242.

2.1.4 Quenched and Tempered Alloy Steel

Tempered alloy steel shall conform to ASTM A 514.

2.2 STRUCTURAL TUBING

Structural tubing shall conform to ASTM A 500.

2.3 STEEL PIPE

Steel pipe shall conform to ASTM A 53, Type S, Grade B.

2.4 RIVETS

Rivets shall conform to ASTM A 502, Grade B.

2.5 HIGH-STRENGTH BOLTS

High-strength bolts shall conform to ASTM A 325, including nuts and washers.

2.6 CARBON STEEL BOLTS

Carbon steel bolts shall conform to ASTM A 307, Grade A.

2.7 CARBON STEEL NUTS

Carbon steel nuts shall conform to ASTM A 563, Grade A, Square Style.

2.8 WASHERS

Plain washers, other than those in contact with high-strength bolts shall conform to ANSI B18.22.1, Type B.

2.9 PAINT

Paint shall conform to FS TT-P-86, Type I or II; FS TT-P-615, Type I, II, or V; or FS TT-P-645.

PART 3 EXECUTION

3.1 FABRICATION

Fabrication shall be in accordance with the applicable provisions of the AISC 326. Fabrication and assembly shall be done in the shop to the greatest extent possible. The fabricating plant shall be qualified under the AISC quality certification program for Category I structural steelwork. Compression joints depending on contact bearing shall have a surface roughness not in excess of 500 micro inches as determined by

ASME B46.1, and ends shall be square within the tolerances for milled ends specified in ASTM A 6. Structural steelwork, except surfaces of steel to be encased in concrete, surfaces to be field welded, surfaces to be fireproofed, [and contact surfaces of friction-type high-strength bolted connections] shall be prepared for painting in accordance with the AISC 326 and primed with the specified paint.

3.2 ERECTION

Erection of structural steel shall be in accordance with the applicable provisions of the AISC 326.

3.2.1 Connections

Anchor bolts and other connections between the structural steel and foundations shall be provided and shall be properly located and built into connecting work.

3.2.2 Base Plates and Bearing Plates

Column base plates for columns and bearing plates for beams, girders, and similar members shall be provided. Base plates and bearing plates shall be provided with full bearing after the supported members have been plumbed and properly positioned, but prior to placing superimposed loads. Separate setting plates under column base plates will not be permitted. The area under the plate shall be damp-packed solidly with bedding mortar, except where expansive grout is indicated on the drawings. Bedding mortar and grout shall be as specified in Section 03300 CONCRETE FOR BUILDING CONSTRUCTION.

3.2.3 Field Welded Connections

Field welded structural connections shall be completed before load is applied.

3.2.4 Field Priming

After erection, the field bolt heads and nuts, field welds, and any abrasions in the shop coat shall be cleaned and primed with paint of the same quality as that used for the shop coat.

Appendix K

4.1 CONSTRUCTION QUALITY CONTROL

Attention is directed to SECTION: CONSTRUCTION QUALITY CONTROL which requires the Contractor to perform quality control inspection, testing, and reporting.

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- REMINDER -

Located at the front of these specifications are the Contract Clauses, Special Clauses, and Division 1 GENERAL REQUIREMENTS of the Technical Specifications which apply to every aspect of this contract including the work in this section whether performed by Prime Contractor, subcontractor, or supplier.

Appendix L

ITEM 1

Spec. No.

INDEX

SECTION 02100

CLEARING AND GRUBBING

Paragraph		Page
1.	DEFINITION	02100-1
2.	MEASUREMENT	02100-1
3.	PAYMENT	02100-1
4.	CLEARING	02100-1
5.	GRUBBING	02100-2
6.	DISPOSAL OF MATERIALS	02100-2
7.	CONSTRUCTION QUALITY CONTROL	02100-2

NOTE: "Redline", "Strikout", or any other electronic method of showing
revisions may be used.

Encl 3 to Amend No. 0001

Appendix M

See CEGS-01090 for listing of Private Standards
Publications and Addresses

Appendix N

Please use the file named 'MANUAL' under SPK/SPKSPECS on this bulletin board for the SPKSPECS MANUAL.

Appendix O

Contact your Corps project manager to obtain the request form for hard copies of guide specifications. See the files under 00INDEX/SPECS on this bulletin board for a listing of current guide specs available.

Appendix P

See 00INDEX/SPECS/CIV for a listing of Civil Works guide specifications available. For hard copy requests contact your Corps Project Manager.

Appendix Q - Example Only

OUTLINE SPECIFICATIONS
FOR
(LOCATION OF JOB)

Section No.	Title	Guide No.	Specific Data
DIVISION 2 - SITE WORK			
02050	Demolition	CEGS-02050	None
02201	Excavation, Filling and Backfilling for Buildings	CEGS-02201	<p>NOTE TO A-E: State if borrow is required and where obtained, on or off (Base) (Post)</p> <p>Belled Caissons: Excavate and drill for belled caissons at walls where shown. Provide protection for cave-ins and ground water. Reach hard rock before forming bell. Raise casing and shoring progressively with concrete placing.</p> <p>Topsoil: Remove to a depth of ____ inches and stockpile where directed.</p> <p>Soil Poisoning: Required</p>
02221	Excavation, Trenching and Backfilling for Utility Systems	CEGS-02221	None
02450	Concrete Sidewalks, Curbs, and Gutters	CEGS-02450	None
02559	Bituminous Prime Coat	CEGS-02559	None (See Foundation Report)
DIVISION 2 - SITE WORK			
02713	Water Lines	CEGS-02713	NOTE TO A-E: All options, except where corrosive

conditions of soil
prohibit use. (See
Foundation Report)

DIVISION 3 - CONCRETE

03300	Concrete	CEGS-03300	Class A for building superstructure, curbs and gutters; Class B for foundations, slab on grade, sidewalks and belled caissons; non-slip finish on stair treads and building entrance slabs; retained in- place metal forms; perimeter insulation (2-inch)
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Appendix R

Contact your Project Manager for a hard copy of the request form for abridged guide specifications. See 00INDEX/SPECS/CEAGS for a listing of the Abridged Guide Specifications available.